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### ANNOUNCEMENT

OF THE

# MEDICAL SCHOOL

LONGWOOD AVENUE, BOSTON, MASS.

OF

### HARVARD UNIVERSITY

FOR

1919-20

WITH AN ANNOUNCEMENT FOR 1920-21



PUBLISHED BY THE UNIVERSITY

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### MEDICAL SCHOOL CALENDAR

	1	919.	
Sept.	10,	Wednesday.	Examinations begin for applicants for advanced standing, and for men previously conditioned.
Sept.	22,	Monday.	Academic Year begins. Registration of Students. Payment of the first instalment of the tuition-fee is required on or before this date.
Oct.	13,	Monday.	Columbus Day: a holiday.
Nov.	27,	Thursday.	Thanksgiving Day: a holiday.
Dec.	10,	Wednesday.	Last day for receiving applications for the Cheever, Haven, and Hayden Scholarships.
	RE	CESS FROM DI	ec. 23, 1919, to Jan. 2, 1920, inclusive
Dec.	31,	Wednesday.	Last day for receiving dissertations for Boylston Prizes.
	1	920.	
Jan.	1,	Thursday	New Year's Day, a holiday.
Jan.	15,	Thursday.	Last day for receiving applications from students in the Professional Schools to be qualified for the degrees of Ph.D. and A.M. in 1919.
Jan.	26,	Monday.	Mid-year Examinations begin.
Jan.	31,	Saturday.	Payment of the second instalment of the tuition- fee is required on or before this date.
Feb.	2,	Monday.	Second half-year begins.
Feb.	23,	Monday.	Washington's Birthday: a holiday.
April	1,	Thursday.	Last day for receiving dissertations for the Bowdoin Prizes.
	•	Recess from	M APRIL 18 TO APRIL 24, INCLUSIVE
May	1,	Saturday.	Last day for receiving dissertations for the Dante, Toppan, and Sumner Prizes.
May	1,	Saturday.	Last day for receiving applications for the Bullard Fellowships and the Moseley Travelling Fellowships.

May 1, Saturday. Last day for receiving applications for Scholarships for 1920-21 (except the Cheever, Haven, and Hayden Scholarships).

May 1, Saturday. Last day for receiving applications of candidates for the degree of M.D. in 1920.

May 31, Monday: Memorial Day: a holiday.

June 1, Tuesday. Examinations begin.

June 24, Thursday. Commencement.

SUMMER VACATION, FROM COMMENCEMENT TO SEPTEMBER 26, INCLUSIVE

Sept. 15, Wednesday. Examinations begin for applicants for advanced standing, and for men previously conditioned.

Sept. 27, Monday. Academic Year begins. Registration of Students. Payment of the first instalment of the tuition-fee is required on or before this date.

Oct. 12, Tuesday. Columbus Day: a holiday.

Nov. 25, Thursday. Thanksgiving Day: a holiday.

Dec. 10, Friday. Last day for receiving applications for the Cheever, Haven, and Hayden Scholarships.

# THE PRESIDENT AND FELLOWS OF HARVARD COLLEGE

This Board is commonly known as the Corporation.

### PRESIDENT

ABBOTT LAWRENCE LOWELL, A.B., LL.B., LL.D., Ph.D.
17 Quincy St., Cambridge

### FELLOWS

HENRY PICKERING WALCOTT, A.B., M.D., LL.D.

11 Waterhouse St., Cambridge

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THOMAS NELSON PERKINS, A.B., LL.B. 60 State St., Boston

WILLIAM LAWRENCE, A.B., D.D., LL.D., D.C.L.

122 Commonwealth Ave., Boston

JOHN FARWELL MOORS, A.M., LL.D. 32 Mt. Vernon St., Boston

TREASURER

CHARLES FRANCIS ADAMS, A.B., LL.B. 50 State St., Boston

DEPUTY TREASURER

GORHAM BROOKS, A.B.

50 State St., Boston

SECRETARIES TO THE CORPORATION

FRANCIS WELLES HUNNEWELL, A.B., LL. B.

5 University Hall, Cambridge

FREDERICK LEWIS ALLEN, A.M. 5 University Hall, Cambridge

\* Died, November 14, 1919.

### THE BOARD OF OVERSEERS

The President and Treasurer of the University, ex officio, and the following persons by election:—

### 1920\*

EDGAR CONWAY FELTON, A.B.

Haverford, Pa.

WILLIAM COWPER BOYDEN, A.B., LL.B.

134 So. La Salle St., Chicago, Ill.

THOMAS WILLIAMS SLOCUM, A.B. 11 Thomas St., New York, N.Y. WILLIAM CAMERON FORBES, A.B., LL.D.

199 Washington St., Boston

JOHN WHITE HALLOWELL, A.B.

New Interior Building, Washington, D.C.

### 1921

ROBERT GRANT, Ph.D., LL.B. JOSEPH LEE, A.M., LL.B.

211 Bay State Road, Boston 101 Tremont St., Boston

I.D., LL.D.

WILLIAM SYDNEY THAYER, A.B., M.D., LL.D.

406 Cathedral St., Baltimore, Md.

ROBERT FREDERICK HERRICK, LL.B., A.B. 84 State St., Boston DWIGHT FILLEY DAVIS, A.B., LL.B.

16 Portland Place, St. Louis, Mo.

### 1922

WILLIAM THOMAS, A.B., LL.B. 310 Sansome St., San Francisco, Cal.

HOWARD ELLIOTT, C.E. 34 Nassau St., New York, N.Y.

JOHN PIERPONT MORGAN, A.B. 23 Wall St., New York, N.Y.

ELIOT WADSWORTH, A.B. 328 Marlborough St., Boston

FRANCIS LEE HIGGINSON, Jr., A.B. 44 State St., Boston

<sup>\*</sup> The term expires, in each case, on Commencement Day of the year indicated.

### 1923

FRANCIS JOSEPH SWAYZE, A.M., LL.D.

765 High St., Newark, N.J.

LEONARD WOOD, M.D., LL.D., D.C.L., M.S.D.

230 East Ohio St., Chicago, Ill.

ARTHUR WOODS, A.M.

Sterlington, N.Y.

JEROME DAVIS GREENE, A.M.

43 Exchange Place, New York, N.Y.

FRANKLIN DELANO ROOSEVELT, A.B.

Navy Department, Washington, D.C.

### 1924

HENRY CABOT LODGE, PH.D., LL.B., LL.D.

United States Senate, Washington, D.C.

GEORGE WIGGLESWORTH, A.M., LL.B. 53 State St., Boston FRANCIS RANDALL APPLETON, A.B., LL.B.

26 E. 37th St., New York, N.Y.

IRA NELSON HOLLIS, A.M., L.H.D., S.D.

Worcester Polytechnic Institute, Worcester

PAUL REVERE FROTHINGHAM, A.M., S.T.B.

294 Beacon St., Boston

### SECRETARY OF THE BOARD OF OVERSEERS

WINTHROP HOWLAND WADE, A.M., LL.B. 99 State St., Boston

### 1925

EDWARD HICKLING BRADFORD, A.M., M.D.

133 Newbury St., Boston

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1004 West End Trust Building, Philadelphia, Pa.

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ELLERY SEDGWICK, A.B. 14 Walnut St., Boston

### MEDICAL SCHOOL

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- DAVID L. EDSALL, M.D., S.D., DEAN, and Jackson
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- WILLIAM H. POTTER, D.M.D., Professor of Operative Dentistry, 520 Beacon St.
- WILLIAM P. COOKE, D.M.D., Professor of Preventive Dentistry and Oral Hygiene, 520 Beacon St.
- ALGERNON COOLIDGE, M.D., Professor of Laryngology, 613 Beacon St.
- ROBERT W. LOVETT, M.D., John B. and Buckminster Brown Professor of Orthopedic Surgery, 234 Marlborough St.
- $\boldsymbol{\ast}$  Arranged, with the exception of the President, Dean, and Assistant Dean, on the basis of collegiate seniority.
  - † The address is Boston unless otherwise stated.

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Dover.

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  - \* Arranged on the basis of collegiate seniority.

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Health Administration in Industry, 53 West Street, Worcester.

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39 St. Paul St., Brookline.

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496 Commonwealth Ave.

CHARLES A. McDONALD, M.D., Ins	tructor in Neu- Vaterman St., Providence, R. I
RICHARD M. SMITH, M.D., Instructor	· · · · · · · · · · · · · · · · · · ·
LESLEY H. SPOONER, M.D., Instruc	
ology,	260 Clarendon St
DELBERT L. JACKSON, M.D., Assist	
rics,	362 Commonwealth Ave
OLIVER A. LOTHROP, M.D., Assista	nt in Otology, 101 Beacon St
HYMAN MORRISON, M.D., Assistant	in Medicine, 520 Beacon St
GEORGE W. MORSE, M.D., Assistant	in Anatomy, 30 Pinckney St
JAMES H. YOUNG, M.D., Assistant a	in Pediatrics, 520 Commonwealth Ave
JOHN B. SWIFT, JR., M.D., Assistant	t in Obstetrics, 443 Beacon St
GEORGE CLYMER, M.D., Assistant in	Neurology, 126 Bay State Road
ARTHUR A. HOWARD, M.D., Assistan	t in Pediatrics, 520 Commonwealth Ave
HALSEY B. LODER, M.D., Instructor	
RICHARD H. MILLER, M.D., Instruct and Assistant in Anatomy,	or in Surgery 279 Clarendon St
OSCAR R. T. L'ESPERANCE, M.D. Genito-Urinary Surgery,	, Assistant in 100 Boylston St
RAYMOND S. TITUS, M.D., Assistant	•
	355 Marlborough St.
PHILIP CASTLEMAN, M.D., Instructo	
ogy,	City Hall Annex
ERNEST G. CRABTREE, M.D., Assist	
Urinary Surgery,	99 Commonwealth Ave.

FREDERICK C. IRVING, M.D., Assistant in Obstetrics,
96 Bay State Road.
FOSTER S. KELLOGG, M.D., Assistant in Obstetrics,

96 Bay State Road. FRANK A. PEMBERTON, M.D., Instructor in Gynaecology, 355 Marlborough St.

EDWARD L. YOUNG, M.D., Assistant in Genito-Urinary Surgery, 3 Agassiz Park, Jamaica Plain.

JOHN H. BLAISDELL, M.D., Assistant in Dermatology, 390 Commonwealth Ave.

HARRY P. CAHILL, M.D., Assistant in Otology,

514 Commonwealth Ave.

RICHARD S. EUSTIS, M.D., Assistant in Pediatrics, 329 Beacon St.

JOSEPH I. GROVER, M.D., Assistant in Pediatrics, 272 Newbury St.

GEORGE A. LELAND, M.D., Assistant in Anatomy and in Surgery,

483 Beacon St.

JAMES H. MEANS, M.D., Instructor in Medicine, 15 Chestnut St.

KARLTON G. PERCY, M.D., Assistant in Pediatrics,

362 Commonwealth Ave.

ROBERT S. QUINBY, M.D., Instructor in the Practice of Industrial Medicine, 361 School St., Watertown.

EDWIN T. WYMAN, M.D., Assistant in Pediatrics, 483 Beacon St.

RICHARD D. BELL, M.D., Research Fellow in Biological Chemistry, 26 Bow St., Somerville.

JAMES P. O'HARE, M.D., Instructor in Medicine,

536 Commonwealth Ave.

CHARLES T. PORTER, M.D., Assistant in Otology, 520 Commonwealth Ave.

PAUL D. WHITE, M.D., Teaching Fellow in Medicine,
Massachusetts General Hosp.

ARTHUR W. ALLEN, M.D., Assistant in Surgery,
1 Newport Road, Cambridge.

DELOS J. BRISTOL, Jr., M.D., Alumni Assistant in Obstetrics, 24 McLean St.

ALLAN R. CUNNINGHAM, M.D., Boston Dispensary
Research Fellow in Pediatrics, 45 Bay State Road.

ELLIOTT C. CUTLER, M.D., Instructor in Surgery,

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GILBERT HORRAX, M.D., Assistant in Surgery, Peter Bent Brigham Hospital.

HERBERT H. HOWARD, M.D., Assistant in Genito-Urinary Surgery, 24 Marlborough St.

FRANCIS M. RACKEMANN, M.D., Alumni Assistant in Medicine, Mass. General Hospital.

EDWARD B. SHEEHAN, M.D., Assistant in Gynaecology, 1066 Commonwealth Ave., Allston.

- WOLFERT G. WEBBER, M.D., Instructor in Preventive Medicine and Hygiene, and Edward Hickling Bradford Fellow, Harvard Medical School.
- STANLEY COBB, M.D., Instructor in Neurology and in Physiology, Ponkapoag.
- ARLIE V. BOCK, M.D., Assistant in Medicine,
  Harvard Medical School.
- JONATHAN FORMAN, M.D., Teaching Fellow in Physiology, 708 Huntington Ave.
- LEWIS W. HILL, M.D., Alumni Assistant in Pediatrics, 99 Commonwealth Ave.
- FRANK W. MARVIN, M.D., Assistant in Anatomy,
- 522 Commonwealth Ave. WILLIAM R. OHLER, M.D., Assistant in Medicine,
- Boston City Hospital.
  ALBERT A. SHAPIRA, M.D., Instructor in Anatomy, 583 Beacon St.
- WADE S. WRIGHT, M.D., Instructor in Industrial

  Medicine,

  48 Williams St., Brookline.
- JOSEPH C. AUB, M.D., Instructor in Physiology,
  Harvard Medical School.
- SAMUEL R. MEAKER, M.D., M.R.C.S., Teaching Fellow in Histology, 784 Beacon St.
- HARRY A. NISSEN, M.D., Alumni Assistant in Medicine, 85 Abbotsford Road, Brookline.
- HOWARD OSGOOD, M.D., Assistant in Preventive Medicine and Hygiene, 19 Willard St., Cambridge
- GEORGE H. BIGELOW, M.D., Instructor in Tropical
  Medicine, 176 Coolidge St., Brookline.
- ETTORE CIAMPOLINI, M.D., Fellow in Preventive

  Medicine and Hygiene, Divinity 17, Cambridge.
- ROBERT W. LAMSON, M.A., Assistant in Preventive Medicine and Hygiene, 706 Huntington Ave.
- MONROE A. McIVER, M.D., Assistant in Tropical Medicine, 199 Aspinwall Ave., Brookline.
- CLARENCE K. REIMAN, D.Sc., Instructor in Applied
  Physiology, 1086 Commonwealth Ave., Allston.
- HOWARD F. WEST, M.D., Alumni Assistant in Medicine, Peter Bent Brigham Hospital.

- GEORGE B. WISLOCKI, M.D., Arthur Tracy Cabot
  Fellow in charge of the Laboratory of Surgical Research,
  Harvard Medical School.
- WARREN T. VAUGHAN, M.D., Assistant in Preventive Medicine and Hygiene, 656 Huntington Ave.
- GEORGE L. CHAFFIN, M.D., Alumni Assistant in Surgery, Mass. General Hospital.
- WALTER C. RUSSELL, B.S., Teaching Fellow in Biological Chemistry, 224 Aspinwall Ave., Brookline.
- WILLIS J. BICKFORD, Jr., D.M.D., Assistant in
  Comparative Anatomy, 5 Bowdoin Ave., Dorchester.
- ROBERT B. BLACKLER, D.M.D., Assistant in Comparative Anatomy, 9 Park Ave., Winchester.
- HSIEN WU, Ph.D., Assistant in Biological Chemistry, 316 Huntington Ave.
- WALTER G. O. CHRISTIANSEN, B.S., Assistant in Pharmacology, 57 Chester St., West Somerville.
- WALLACE O. FENN, Ph.D., Instructor in Applied
  Physiology, 10 Park Drive, Brookline
- PAUL F. ORR, M.S., Charles Follen Folsom Teaching Fellow in Hygiene, 73 Gainsborough St.

### AUSTIN TEACHING FELLOWS

CARL T. HARRIS, M.D., in Surgery,

103 Mountfort St.

DAVID L. RAPPORT, M.D., in Physiology,

367 Harvard St., Cambridge.

RALPH F. SHANER, Ph.B., in Histology, 81 Fenwood Road.

### ADMINISTRATIVE OFFICERS OF THE MEDICAL SCHOOL

- President: Abbott Lawrence Lowell, Ll.B., Ll.D., Ph.D. Office. 5 University Hall, Cambridge.
- Dean: DAVID L. EDSALL, M.D., S.D.
  - Office, Room 104, Administration Building, Medical School. Office hours by appointment.
- Assistant Dean: WORTH HALE, M.D.
  - Office, Room 104, Administration Building, Medical School. Office hours, Tuesdays, Wednesdays, and Thursdays, 4 to 5 P.M., and by appointment.
- Assistant Dean of Graduate Courses: ALEXANDER S. Begg, M.D. Office, Room 108, Administration Building, Medical School. Office hours, daily, 12-1.
- Director of Scholarships in the Medical School: Franklin Dexter, M.D. Office, Room 386, Building D I, Medical School. Office hours, Mondays, 2 to 3.15 p.m., for appointments.
- Director for Appointments for Medical Alumni: WILLIAM C. QUINBY, M.D. Office, Peter Bent Brigham Hospital. Office hours, by appointment.
- Adviser to Students in Harvard College preparing for the study of Medicine: Lawrence J. Henderson, M.D.
  - Office hours, by appointment. Telephone, Cambridge 3296-M.
- Chairman of the Committee on the Degree of Doctor of Public Health:
  Milton J. Rosenau, M.D.
  - Office, Room 238, Building E II, Medical School. Office hours by appointment.
- Chairman of the Division of Medical Sciences of the Faculty of Arts and Sciences: LAWRENCE J. HENDERSON, M.D.
  - Office hours by appointment. Telephone, Cambridge 3296-M.
- Physician to Students: George P. Denny, M.D.
  - Office, Room 203, Administration Building, Medical School. Office hours, Mondays, Wednesdays, and Fridays, 12-1 p.m., or by appointment. Telephone, Back Bay 2760.

The Bursar's Office is at the Delta, Kirkland Street, Cambridge. It is open daily, except Sundays and holidays, from 9 to 1, for the receipt of fees, payments, and other financial business. A representative of the Bursar will be in the Administration Building at the Medical School at stated hours on certain days at the opening of each term for the receipt of fees from regular students.

### COMMITTEE OF PROFESSORS

A. LAWRENCE LOWELL, LL.B., LL.D., Ph.D., PRESIDENT.

DAVID L. EDSALL, M.D., S.D., DEAN.

JOHN L. BREMER, M.D., Associate Professor of Histology.

RICHARD C. CABOT, M.D., Professor of Clinical Medicine.

WALTER B. CANNON, M.D., George Higginson Professor of Physiology.

HENRY A. CHRISTIAN, M.D., Hersey Professor of the Theory and Practice of Physic.

ALGERNON COOLIDGE, M.D., Professor of Laryngology.

WILLIAM T. COUNCILMAN, M.D., A.M., LL.D., Shattuck Professor of Pathological Anatomy.

Eugene A. Crockett, M.D., Walter Augustus Lecompte Professor of Otology.

HARVEY CUSHING, M.D., S.D., F.R.C.S., Moseley Professor of Surgery.

CECIL K. DRINKER, M.D., Associate Professor of Applied Physiology.

HAROLD C. ERNST, M.D., A.M., Professor of Bacteriology.

Otto Folin, Ph.D., S.D., Hamilton Kuhn Professor of Biological Chemistry.

WILLIAM P. GRAVES, M.D., Professor of Gynaecology.

WORTH HALE, M.D., Associate Professor of Pharmacology.

Reid Hunt, M.D., Professor of Pharmacology.

Frederic T. Lewis, M.D., Associate Professor of Embryology.

ROBERT W. LOVETT, M.D., John B. and Buckminster Brown Professor of Orthopedic Surgery.

JOHN L. MORSE, M.D., Professor of Pediatrics.

Franklin S. Newell, M.D., Professor of Clinical Obstetrics.

Edward H. Nichols, M.D., Professor of Clinical Surgery.

CHARLES A. PORTER, M.D., Professor of Clinical Surgery.

WILLIAM T. PORTER, M.D., LL.D., S.D., Professor of Comparative Physiology.

Alexander Quackenboss, M.D., Professor of Ophthalmology.

MILTON J. ROSENAU, M.D., A.M., Professor of Preventive Medicine and Hygiene.

ELMER E. SOUTHARD, M.D., A.M., S.D., Bullard Professor of Neuro-pathology.

RICHARD P. STRONG, M.D., S.D., Professor of Tropical Medicine.

EDWARD W. TAYLOR, M.D., Professor of Neurology.

- ERNEST E. TYZZER, M.D., George Fabyan Professor of Comparative Pathology.
- JOHN WARREN, M.D., Associate Professor of Anatomy.
- Charles J. White, M.D., Edward Wigglesworth Professor of Dermatology.
- S. Burt Wolbach, M.D., Associate Professor of Bacteriology and Pathology.

### ADMINISTRATIVE BOARD

- PRESIDENT A. LAWRENCE LOWELL, LL.B., LL.D., Ph.D., (ex officio).
- DEAN DAVID L. EDSALL, M.D., S.D., (ex officio), Chairman.
- ALGERNON COOLIDGE, M.D., Professor of Laryngology.
- MILTON J. ROSENAU, M.D., Professor of Preventive Medicine and Hygiene.
- REID HUNT, M.D., Professor of Pharmacology.
- OTTO FOLIN, Ph.D., S.D., Hamilton Kuhn Professor of Biological Chemistry.
- J. LEWIS BREMER, M.D., Associate Professor of Histology.
- DAVID CHEEVER, M.D., Assistant Professor of Surgery, and Associate in Anatomy.

### FACULTY COUNCIL

- JOHN L. BREMER, M.D., Associate Professor of Histology (Chairman).
- PAUL THORNDIKE, M.D., Clinical Professor of Genito-Urinary Surgery.
- EUGENE A. CROCKETT, M.D., Walter Augustus Lecompte Professor of Otology.
- EDWARD W. TAYLOR, M.D., Professor of Neurology.
- ERNEST E. TYZZER, M.D., George Fabyan Professor of Comparative Pathology.
- CECIL K. DRINKER, M.D., Assistant Professor of Physiology.

### OTHER COMMITTEES

Visiting Committee of the Medical School appointed by the Board of Overseers.—Frederick C. Shattuck, William S. Thayer, Eliot Wadsworth, Charles W. Eliot, J. Collins Warren, William L. Richardson, Henry Saltonstall Howe, Edward H. Bradford, Harold Williams, Edmund D. Codman, Homer Gage, Wallace L. Pierce, Clarence W. Barron, Charles P. Curtis, and William Lindsey.

- Admission of Students to First Year. Otto Folin, J. Lewis Bremer, Walter B. Cannon, Worth Hale.
- Admission to Advanced Standing.—Reid Hunt, J. Lewis Bremer, Walter B. Cannon, S. Burt Wolbach, Worth Hale.
- Animals. Walter B. Cannon, William C. Quinby, Ernest E. Tyzzer, S. Burt Wolbach, Alexander Forbes, George B. Wislocki.
- Artistic and Memorial Objects. J. Collins Warren, Harold C. Ernst, David L. Edsall, Charles A. Coolidge, Edward W. Forbes.
- Degree of Doctor of Public Health. MILTON J. ROSENAU, DAVID L. EDSALL, REID HUNT, WALTER B. CANNON, ERNEST E. TYZZER.
- Examinations. A. Lawrence Lowell, William S. Thayer, Algernon Coolidge, David L. Edsall, Robert W. Lovett, Cecil K. Drinker.
- Friday Afternoon Lectures, Fourth Year. Algernon Coolidge, Robert W. Lovett, John Warren.
- Graduate Courses. Francis W. Peabody, Chairman, Charles L. Scudder, Milton J. Rosenau, Harris P. Mosher, Andrew W. Sellards, Cecil K. Drinker.
- Library. ELLIOTT P. JOSLIN, DAVID CHEEVER, FREDERIC T. LEWIS, S. BURT WOLBACH, CYRUS H. FISKE.
- Microscopes. Harold C. Ernst, J. Lewis Bremer, Francis W. Pea-Body.
- Public Lectures. Harold C. Ernst, William P. Cooke, Robert W. Lovett, Percy G. Stiles, Channing Frothingham, Alexander S. Begg.
- Scholarships and Students Aid. DAVID L. EDSALL, FRANKLIN DEXTER, REID HUNT, WALTER B. CANNON.
- Student Affairs. Algernon Coolidge, J. Lewis Bremer, Nathan C. Foot.

# HARVARD MEDICAL SCHOOL BOSTON

### REQUIREMENTS FOR ADMISSION

As candidates for the Degree of Doctor of Medicine the School receives the following:

- I. Graduates in arts or science of approved colleges or scientific schools.
- II. Students who have completed two years of work in a college or scientific school of high rank, provided they present certificates that they have maintained a rank in the first third of their class.

### LANGUAGE AND SCIENCE REQUIREMENTS\*

- (a) All applicants must present evidence that they have such knowledge of English as is ordinarily required of all candidates for a degree in an approved college and that they have a reading knowledge of French or of German.
- (b) They must present evidence that they have college credits for at least a year's work in general inorganic chemistry, in physics and in biology, and for a half-year's work in organic chemistry.

To meet the science requirements satisfactorily, time credit as follows should be secured:

Inorganic Chemistry: A minimum of eight semester hours, of which at least four should be laboratory work.

Organic Chemistry: A minimum of four semester hours, of which at least two should be laboratory work.

Physics: A minimum of eight semester hours, of which at least two should be laboratory work.

Biology: A minimum of eight semester hours (including not less than four hours of zoölogy), of which at least four should be laboratory work.

Note. — A semester hour is one hour of lecture or recitation, or two hours of laboratory work, per week for one half-year or sixteen weeks. Full courses at Harvard count as eight semester hours.

\* It is assumed that before admission to an acceptable college a four years' course in High School or its equivalent will have been completed.

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# HARVARD MEDICAL SCHOOL

At a meeting of the Faculty of Medicine held on April 2, 1920, it was

also that their college work has been of such character as to give promise of work of high quality in the medical course. that they have passed the courses necessary to fulfil the requirements but must present evidence satisfying the Committee on Admission not simply VOTED: That all applicants whether or not graduates of colleges As the fo I. II. scient have

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While these requirements are to be satisfied in full before matriculation, deficiencies in single subjects may be made up prior to admission by courses preferably in the Harvard Summer School.

The Administrative Board reserves the right to refuse all applicants exceeding such a number as can be effectively taught.

Students are requested to apply for admission before May 1.

### ADMISSION TO ADVANCED STANDING

Students who began their medical studies in approved medical schools may be admitted to advanced standing and become candidates for the degree of M.D. under the following conditions:—

They must have fulfilled the requirements for admission enumerated on the preceding page prior to their matriculation as students of medicine. They must be vouched for as promising men by the Dean or other responsible officer of the School from which they come.

They must furnish a certificate of time spent in medical study at least equal to that spent by the class to which they seek admission.

They must furnish certificate that they have done satisfactory laboratory and practical work in the subjects already pursued by the class to which they seek admission. The Committee on Admission will decide in each case whether examinations in the various subjects shall be required.

The minimum time of residence at this School for candidates for the degree of M.D. shall be one year; all candidates for the degree of M.D. must perform in full the work of the fourth year of the regular curriculum.

### GENERAL REGULATIONS

Students are divided into four classes according to their time of study and proficiency. No student may advance with his class if he has failed to pass satisfactorily any essential part of the requirements of the previous year. No student with conditions in first-year work may be promoted to the third year; and no student with conditions in second-year work may be promoted to the fourth.

The Faculty reserves the right to require the withdrawal of any student at any time whenever in the opinion of his instructors it is manifest that he is incompetent for his work, or for any reason is unfit to continue his course.

Students registering in the Medical School for the first time will meet in the amphitheatre in the Administration Building, on Monday, preceding the last Wednesday in September, at 10 a.m. In order that the time of study shall count as a full year students of all classes must register on Monday, the first day of the session.

Students are required not to engage as hospital assistants during term time, except in so far as required by the School curriculum or allowed in each case by the Administrative Board. A student may do a certain amount of required work during the summer, but may not thereby shorten his course.

### EXAMINATIONS

Each student will receive a rating in each course based upon examinations or other tests as determined by each Department. These marks shall be on the scale of 100, the pass mark being 75.

No student is allowed to anticipate the examinations in the regular course of studies of his year except by special permission of the Administrative Board.

After two failures to pass an examination each student must pay a fee of three dollars at the Dean's Office before appearing for each additional examination in the same subject.

At the end of each School year a Board consisting of members of each department giving the principal courses during that year, shall review each student's work for the year, promote those evidently fitted into the next class; warn or condition any student whose work has been unsatisfactory; and recommend to the Administrative Board that such students as are not likely to keep up with their class be required to withdraw.

At the end of the fourth year a General Examination including the subjects of the four years will be required of all candidates for the degree of M.D. The Committee conducting the General Examination may give such written or oral tests as it considers best for determining an applicant's fitness for receiving the degree and for honors.

Before taking the General Examination a student must have a satisfactory record in each of the required subjects of his course. In certain cases, by special permission, he may be allowed to take the examination before completing minor requirements for the degree.

Any student who fails three times in the General Examination will be debarred from further attempts.

### WITHDRAWAL FROM THE SCHOOL

Whenever a student is obliged to withdraw from the School before the last four weeks of a half-year for no misdemeanor, but for good and sufficient reason, to be determined in all cases by the Administrative Board, it shall be recommended that he be entitled to a remission of three-fourths of the amount due for that portion of the time during which he receives no

DEGREES 29

instruction. This remission will date from the reception by the dean of a written notice of the student's withdrawal from the School. At the student's option, he may leave his fees deposited with the Bursar to be used at some later date for instruction equivalent to that which he missed by his withdrawal.

#### DEGREES

#### DEGREE OF DOCTOR OF MEDICINE

Every candidate for the degree of Doctor of Medicine at this University must be at least twenty-one years of age, and of good moral character. He must have fulfilled all the requirements for admission to this Medical School; give evidence of having studied in a recognized medical school at least four full years, of which one year must be spent in the regular fourth-year course of this School; pass all the required examinations; have dissected the three parts of the body to the satisfaction of the demonstrator; have taken charge of and reported on twelve cases in Obstetrics under supervision and instruction; and furnish evidence of having engaged in the practical exercises in Medicine and Surgery.

The degree of Doctor of Medicine cum laude or magna cum laude may be given to students of highest rating in the class on recommendation of the Committee on Examinations.

For special and approved purposes students may be allowed to take a portion of their work elsewhere than at the Harvard Medical School, provided that the application be approved by the Dean in consultation with the Administrative Board and the head of the Department concerned and provided that the student pass an examination on this work after its completion conducted by a member of the Faculty of the Harvard Medical School.

Every candidate for the degree of M.D. must make application for it in writing on blanks furnished at the Dean's office, on or before May I of the year in which they propose to graduate.

#### DEGREE OF DOCTOR OF PUBLIC HEALTH

The degree of Doctor of Public Health is open to holders of the degree of Doctor of Medicine from the Harvard Medical School or other recognized Medical Schools, and to other properly qualified persons. Candidates for the degree of Doctor of Public Health must spend not less than one year in work upon a special subject, approved by the Committee on the Degree of Doctor of Public Health, and present a thesis containing some original research acceptable to the Faculty of Medicine. Candidates for this degree may be given credit for any course offered in any department of the University, provided it has the approval of the Faculty of Medi-

cine, and candidates from other institutions may be admitted to advanced standing. A minimum of one year in residence shall be required of all candidates for the degree of Doctor of Public Health. Information in regard to this degree may be had from Dr. M. J. ROSENAU, Chairman of the Committee on the Degree of Doctor of Public Health.

Candidates for this degree must make application in writing, on blanks furnished at the Dean's office, on or before May I of the year in which they propose to graduate.

#### DEGREES OF MASTER OF ARTS AND DOCTOR OF PHILOSOPHY

There has been established within the Faculty of Arts and Sciences a Division of Medical Sciences consisting of members of the Faculties of Medicine and of Arts and Sciences, which is to recommend to the Faculty of Arts and Sciences candidates for the degrees of A.M. and Ph.D. Work in Medical Sciences leading to these degrees may be carried on in several of the laboratories of the Medical School by properly qualified students.

Candidates for the degree of Master of Arts must be Bachelors of Arts of Harvard College, or Bachelors of Arts of other colleges who shall be recommended by the Faculty of Arts and Sciences. Candidates must pursue an approved course of study in medical science for at least one year.

Candidates for the degree of Doctor of Philosophy must fulfil certain preliminary requirements, must devote to approved advanced studies not less than two years — at least one of which must be spent in residence at this University, and must pass general examinations and present an account of original work in an accepted thesis, before being granted the degree.

Further information concerning these degrees may be obtained from Dr. LAWRENCE J. HENDERSON, Chairman of the Division of Medical Sciences, 4 Willard Street, Cambridge, Mass.

# FEES AND EXPENSES

#### DEGREE OF DOCTOR OF MEDICINE

The fees are:—For matriculation, \$5; for instruction (including laboratory charges except breakage, damage and loss of apparatus), \$225 for each year (if in two payments, at the first, \$135; at the second, \$90); for a half-year alone, \$135. The matriculation fee and the instruction fee (if in two payments, the first instalment thereof) are to be paid to the Bursart

† The Bursar's office is at the Delta, Kirkland Street, Cambridge. Hours 9-1.

punctually at the beginning of the academic year, without the presentation of a bill; and the second instalment is to be paid on or before January 31. On or before January 31, first-year students are to make a deposit of \$10 with the Bursar to cover charges for breakage, damage and loss of apparatus, during the first and second years in accordance with the requirements established by the several departments in which they occur.

If, at the end of a student's first year, his breakages, etc., have been so great as to render the deposit in the Bursar's judgment insufficient to cover probable charges for the second year, a further deposit will be required at the beginning of the second year. No degree can be granted until the student has paid the full tuition fee for each year (first, second, third, fourth) in which he has been registered as a member of the School.

Each student whose dues remain unpaid on the day fixed for their payment is required at once to cease attending lectures and using laboratories or making use of any other privileges as a student until his financial relations with the University have been arranged satisfactorily to the Bursar. Failure to comply with this rule is deemed cause for final separation from the University. A student may rent a microscope from the School upon application to the Committee on Microscopes. A deposit of \$1 with the Dean will entitle the student to the use of a locker in the School buildings.

There are no dormitories. Students find rooms in houses near the School, at from \$2.50 to \$7 a week; table board (usually not given at the same house) may be had for about \$7 a week.

#### STILLMAN INFIRMARY FEE

Not later than October I in each academic year, any student may pay to the Bursar the sum of \$4 for the maintenance of the Stillman Infirmary; and, on the order of a physician, every student who has taken advantage of this opportunity will be given, in case of sickness, in return for the fee, a bed in a ward, board, and ordinary nursing for a period not exceeding two weeks in any one academic year.

The Medical School provides a physician to students who will give physical examination or medical treatment without charge during his office hours, from 12 to 1 o'clock on Mondays, Wednesdays, and Fridays, Room 203, Building A, or at other times by appointment.

#### BOND REQUIRED OF STUDENTS

Every student is required to file with the Bursar on his entrance to the School a bond of \$50 executed by two sufficient bondsmen (one of whom must be a citizen of the United States), or to deposit \$50 in money, to cover the loss or injury of any property belonging to the University, or for which it is responsible. Blank forms of bonds may be obtained at

the Dean's Office or from the Bursar. No officer or student of the University is accepted as a bondsman. Students will be held responsible for the payment of fees until they have notified the Dean, in writing, of their intention to withdraw from the School and have subsequently received their bond from the Bursar.

### DEGREE OF DOCTOR OF PUBLIC HEALTH

A fee of \$150 annually is charged for tuition, and \$5 for matriculation. Of this amount, \$95 must be paid to the Bursar at the beginning of the academic year without the presentation of a bill; the remaining \$60 must be paid on or before January 31. No degree can be conferred until all dues to the University have been discharged.

#### DEGREES OF MASTER OF ARTS AND DOCTOR OF PHILOSOPHY

For these degrees, a fee of \$200 is charged for tuition, in each academic year, payable, in Cambridge, in four instalments of \$50 each, respectively, on or before the opening day of the academic year, on or before November 21, February 10, and April 26. No bill is sent for these instalments. No degree can be conferred until all dues to the University have been discharged.

### BUILDINGS AND LABORATORY ADVANTAGES

The Harvard Medical School started as a branch of the University in 1782, when three professorships of medicine were established. The first degrees in medicine were conferred in 1788. Before 1811, the degree conferred was that of Bachelor of Medicine; after that date the degree of Doctor of Medicine was established. The first Medical School was built in Boston in 1815. In 1906, the Medical School moved into its quarters on Longwood Avenue.

The Medical School Buildings occupy eleven acres on Longwood Avenue, Boston, and are five in number: one is designed for administrative and four for laboratory purposes. The administration building contains the necessary offices, several lecture rooms, the Library, and the Warren Anatomical Museum. The laboratory buildings provide extensive accommodations for various departments, grouped in the buildings as follows:—(1) anatomy, comparative anatomy, histology and embryology; (2) physiology, comparative physiology, biological chemistry, and theory and practice of physic; (3) pathology, bacteriology, neuropathology, surgical pathology, and tropical medicine; (4) preventive medicine and hygiene, pharmacology, comparative pathology, and surgery.

The laboratory buildings are all constructed on one general plan—two parallel wings united by an amphitheatre. The rooms in the various wings have been designed on a unit system, which will greatly simplify any changes required by future growth or by uses other than those for which the rooms were originally designed. These buildings provide an equipment for teaching and research in various branches of medical science which as a whole is probably unequalled.

# HOSPITAL FACILITIES

The Medical Department of the University was established in Boston in order to secure for the various clinical subjects those advantages which are found only in large cities. The following clinics and hospitals of Boston are utilized extensively for clinical exercises for medical students, who are admitted freely to the out-patient departments, wards, and operating rooms of these hospitals:—

The Peter Bent Brigham Hospital.—This general hospital has been in active operation since February, 1913. The hospital is for general medical and surgical cases, and is situated on ground adjacent to the Medical School buildings. There are in all two hundred beds, and there is a medical and surgical out-patient department which is open for patients throughout the day. Dr. Henry A. Christian, Hersey Professor of the Theory and Practice of Physic, and Dr. Harvey Cushing, Moseley Professor of Surgery, in the Harvard Medical School, have been appointed by the trustees of the Hospital Physician-in-chief and Surgeon-in-chief respectively.

The Collis P. Huntington Memorial Hospital.—This Hospital, which has been erected by the Cancer Commission of Harvard University on the Medical School grounds, affords opportunity for the study of human tumor cases, with the advantage of a close approximation of clinical and laboratory facilities. The aim of the hospital is the study of special problems with the view of adding to the knowledge of the natural history and the rational treatment of tumors, and also to be of public service in affording means for early diagnosis and in carrying out treatment or giving advice regarding therapeutic measures. Accommodations are provided for twenty-five in-patients; out-patients are also received at stated hours.

During the past year, nine hundred new patients were treated in the house and out-patient department.

The Massachusetts General Hospital. — During the past year, six thousand seven hundred and two patients were treated in the wards, six thousand one hundred and thirty-one patients were treated in the Emergency Ward, and there were one hundred and sixty-eight thousand one hundred

and eighty-three visits to the out-patient departments. Patients are received from all parts of the United States and the Provinces, and are visited by the students, with the attending physicians and surgeons, or demonstrated in the amphitheatres. Operations are numerous, and are performed in the surgical building. Last year there were four thousand one hundred and seventeen operations in the house and one thousand six hundred and fifty-eight in the out-patient department. Clinics in the following special branches have been established in connection with the out-patient department: Dermatology, Laryngology, Diseases of the Nervous System, Children's Diseases, Orthopedic Surgery, Diseases of the Genito-Urinary System, and Syphilology. Two Dalton scholarships, of \$500 each, are open annually to the house pupils and graduates.

The Boston City Hospital. — During the past year, twenty-two thousand eight hundred and sixty-one cases were treated in its wards, and there were one hundred and sixty-two thousand six hundred and twenty-one visits in its various out-patient departments. The medical wards always contain many cases of acute diseases, and changes are taking place constantly. The opportunities for seeing fractures, injuries, and traumatic cases of all kinds are excellent, since, on an average, forty-five thousand street accidents are treated yearly. Surgical operations are performed in the amphitheatre. There are special services for diseases of women, of the eye, the ear, the skin, the nervous system, the nose and throat, and the genito-urinary system. Diseases of women and of the nervous system are also largely treated in the out-patient department. Clinical instruction is given by the physicians and surgeons two or more times a week.

In this hospital, the facilities for witnessing Operative Surgery are unsurpassed. Four times a week operations are performed in the presence of the class. The number of these operations is large, reaching over five thousand a year. The variety is great, embracing every surgical disease and injury, including the surgical operations on the eye and ear.

The Boston Consumptives' Hospital. — This is a thoroughly modern hospital of four hundred and twenty-five beds for the treatment of tuberculosis, including a special hospital for infants and children of sixty beds. The Hospital affords facilities for the demonstration of all stages and types of the disease as well as the various forms of treatment. The Institution is closely affiliated with the Harvard Medical School. Assistant Professor Locke is Chief of Staff, and Dr. Frank Hunt, Instructor in Medicine, is Resident Physician. Under their direction students in the Harvard Medical School will have practical instruction in tuberculosis in the wards of this Hospital.

The Boston Lying-in Hospital.—Over twelve hundred patients received treatment during the last year in the Hospital, of whom nine hundred and sixty-three were delivered. In the out-patient department, one thousand three hundred and ninety-two cases were attended by the hospital externes, who are appointed from the third and fourth-year students. Clinical instruction is given, in these cases, by the obstetricians to out-patient department, by the house physicians, and by the Alumni Assistant.

The Boston Dispensary. — Over one hundred and seventeen thousand visits were made by out-patients at this charity during the past year. Students have ample and excellent opportunity for seeing practical work in the diagnosis and treatment of cases illustrating the various branches of Medicine and Surgery. The opportunities in children's work are unusually good, as over one-third of the out-patients are children and there is, in addition, a well-equipped Hospital for Children, with twenty-six beds chiefly for medical cases.

Infants' Hospital (Rotch Memorial Building). — The wards of the Hospital are devoted entirely to the medical care of infants. The material of the Hospital is used throughout the year for teaching both students and graduates. Fifty beds.

The Children's Hospital. — In April, 1914, the new buildings of the Hospital on Longwood Avenue, adjacent to the Harvard Medical School, were opened. During the past year three thousand three hundred and thirty-four cases were treated in the wards and thirty-nine thousand one hundred and eighty-five visits were made to the out-patient departments. Instruction in pediatrics, surgery, and orthopedic surgery is given by members of the hospital staff.

From September, 1917, through May, 1919, four intensive courses in military Orthopedic Surgery were given to surgeons detailed for the purpose by the Surgeon General of the United States.

The McLean Hospital. — During the past year a daily average number of two hundred and eight patients, received from all parts of the country, were under treatment. Advanced methods of treatment are employed, including physical exercise, occupation, massage, hydrotherapy, etc., applied by persons expert in these methods. In the laboratories, pathological and psychological work is carried on in immediate connection with the clinical studies and treatment of cases. There is a good special library of works in psychiatry and neurology, and a large list of American and foreign journals available for study. Clinical conferences are regularly held by the Medical Staff for the discussion of all cases admitted,

including a study of the history, diagnosis, prognosis, and treatment of each case. These exercises and clinical demonstrations in the wards are available for a limited number of students.

The Boston State Hospital. — During the past year four thousand and fifty-three patients were under treatment. Clinical instruction is given at the Psychopathic Department, Fenwood Road, in general clinics to medical students, and there are in addition facilities for the special study of cases by students taking elective courses. Besides regular commitments, emergency, voluntary and temporary care cases are received; the whole number of patients admitted last year was one thousand three hundred and sixty-one, including many instructive examples of the various forms of mental disease.

Psychopathic Department, Boston State Hospital.—This is a state institution for acute, curable, incipient, and doubtful cases of mental disease (not for committed cases, which latter go directly to the wards of the Boston State Hospital), situated on Fenwood Road, two blocks removed from the Medical School grounds. The hospital was opened to patients in June, 1912. It has one hundred beds and receives patients at the rate of about two thousand a year. This large admission rate insures the presence at all times in the hospital wards of a varied clinical and pathological material. The out-patient department receives patients at the rate of over fifteen hundred a year. The State Commission on Mental Diseases has provided laboratories in the building.

The Massachusetts Charitable Eye and Ear Infirmary. — About seventy-three thousand visits are made yearly by patients in the out-patient department and forty-six hundred are treated in the wards, affording an opportunity to observe every variety of eye and ear diseases, together with daily operating. The services are so arranged that it is possible to easily follow the patient through his entire course of treatment both in the ward and out-patient department.

The Free Hospital for Women. — This hospital is devoted exclusively to the surgical treatment of the diseases peculiar to women. The hospital has a capacity of sixty-three beds. Operations are performed on Tuesdays, Wednesdays, and Thursdays throughout the morning. Physicians and medical students are invited to attend the operations and the medical ward visits with the Visiting Surgeon. Out-patient clinics are held every day in the week, beginning at nine o'clock in the morning. The clinics average from fifteen to thirty in attendance. Post-graduate courses in gynaecological examinations are given in these clinics. A well-equipped laboratory is connected with the institution, where instruction in gynaecological pathology is given. A library containing the principal works on gynaecology is available for the use of students and visiting physicians.

#### LIBRARIES

The central library of the School is housed in Charles B. Porter Hall in the Administration Building, and in the other buildings are branch libraries. By an arrangement with the Peter Bent Brigham Hospital the library facilities of the two institutions are combined in the central library. This library is open from 9 a.m. until 10 p.m., on Saturdays from 9 a.m. until 1 p.m. The present number of volumes in the library is thirty-two thousand nine hundred and forty-nine, and in addition there are fifty-six thousand four hundred and forty-five pamphlets and two hundred and eighty-five current periodicals kept on file.

The College Library at Cambridge is open to the students of this School. The Boston Public Library is open to students who are inhabitants of Boston. Students, not inhabitants of Boston, who have filed a bond at the Bursar's office, or deposited with the Bursar the sum of fifty dollars, may also use this library. The Bursar will furnish on application the necessary certificate of bond or deposit.

The Boston Medical Library, No. 8 The Fenway, contains about eighty-four thousand bound volumes and fifty-six thousand pamphlets, and nearly six hundred and fifty current periodicals are on file. This very valuable library is open to those who desire to consult medical literature, on week days from 9.30 A.M. to 10 P.M., on Saturdays till 6 P.M.

#### WARREN ANATOMICAL MUSEUM

The Warren Anatomical Museum was founded in 1847 by John Collins Warren, of the College Class of 1797, Adjunct Professor of Anatomy and Surgery from 1809 to 1815, Hersey Professor of Anatomy and Surgery from 1815 to 1847, Professor *Emeritus* from 1847 to his death in 1856, son to John Warren, the first Hersey Professor of Anatomy and Surgery. This important Museum is open to students in the School, and its collections are used in demonstration of the lectures. It occupies the upper three floors of the Administration Building. Its Curator is Dr. William Fiske Whitney.

The collection has about eleven thousand specimens, illustrating both normal and pathological anatomy. Students may have access to these specimens at any time upon application to the Curator.

Besides dissections and serial sections of many bones, the anatomical collection includes many corrosion preparations, plaster and papier maché models of bones, organs, and various parts of the body, and frozen sections.

The pathological collection is being constantly enlarged by the addition of numerous specimens, many of them preserved in their natural colors.

The American Ambulance of Paris has contributed a large number of specimens, from the European War, showing the effects of bullet wounds of the head and extremities, and the lesions of "gas gangrene." Also photographs of apparatus and the results of operation. The whole forms a most valuable collection, especially for a student of military surgery.

Exhibits of specimens illustrating topics of special interest are made from time to time, and the latest one is from the recent epidemic of influenza.

# HOSPITAL APPOINTMENTS

About eighty appointments as internes and assistants are made annually to hospitals in and about Boston for terms of service varying from six months to two years. These appointments are made after a competitive examination. In recent years almost every graduate of the Harvard Medical School desirous of hospital experience has obtained an appointment in some one of these hospitals.

### THE CANCER COMMISSION OF HARVARD UNIVERSITY

The Cancer Commission of Harvard University was founded in 1899, by the late Mrs. Caroline Brewer Croft, who left in her will a sum of money for the investigation of the cause and treatment of cancer. Dr. J. Collins Warren and Dr. Henry K. Oliver were the Trustees of this Since that time other sums have been contributed for cancer research and the Cancer Commission of Harvard University was organized in 1909, consisting of the following members: J. Collins Warren, M.D., Chairman; Henry K. Oliver, M.D., and J. Collins Warren, M.D., for the Caroline Brewer Croft Fund; Henry P. Walcott, M.D., and Arthur T. Cabot, M.D., for the Corporation of Harvard College; William T. Councilman, M.D., and Theobald Smith, M.D., for the Harvard Medical School. To fill the vacancy caused by the death of Dr. Arthur T. Cabot, Dr. Edward H. Bradford was appointed in 1912; on the resignation of Dr. Theobald Smith, Dr. E. E. Tyzzer was appointed in 1916. Mr. Roger Pierce is Treasurer, Dr. Robert B. Greenough, Director, and Dr. Channing C. Simmons, Secretary of the Commission.

Under this Commission research on cancer problems has been carried on, and eight reports of research work have been published. Investigations were carried on in the laboratories of the Harvard Medical School, and at the Massachusetts General Hospital until April, 1912, when the Collis P. Huntington Memorial Hospital (page 33) was completed. The work of the Cancer Commission is at present carried on in the laboratories of the Harvard Medical School and in the Huntington Hospital. Robert B. Greenough, M.D., Assistant Professor of Surgery, is Surgeon in charge

of the Hospital, Edward H. Risley, M.D., and Channing C. Simmons, M.D., are Surgeons; George R. Minot, M.D., is Physician; Henry A. Christian, M.D., (on leave) and Francis W. Peabody, M.D., are Consulting Physicians; D. Crosby Greene, M.D., is Laryngologist; George A. Leland, M.D., is Surgeon to Out-Patient Department; and J. Homer Wright, M.D., is Pathologist in Charge of Diagnosis Service. Miss Anna Gibson is Matron and Superintendent of the Hospital.

William Duane, Ph.D., Professor of Bio-physics, is Research Fellow of the Cancer Commission in charge of the research work on radium and radioactive substances, and their preparation for therapeutic use. William T. Bovie, Ph.D., is Research Fellow in Biology; Clarence C. Little, S.D., (on leave) in Genetics; and Henry Lyman, M.D., (on leave) in Chemistry.

#### HARVARD INFANTILE PARALYSIS COMMISSION

A Commission for the purpose of assisting in the early recognition, treatment, and study of infantile paralysis was appointed by the Corporation September 25, 1916. The Commission consists of Dr. Robert W. Lovett (Chairman), Professor of Orthopedic Surgery, Dr. Milton J. Rosenau, Professor of Preventive Medicine and Hygiene, Dr. Edwin H. Place, Assistant Professor of Pediatrics, Dr. Francis W. Peabody, Assistant Professor of Medicine, and Roger Pierce (Secretary).

Shortly thereafter, the members of the Harvard Infantile Paralysis Commission were appointed agents of the State Department of Health, thereby assuring coöperation between the Commission and the Commonwealth. This action widely increased the purposes and also the responsibilities of the Commission, in that it at once took cognizance of the disease and its after-effects throughout the state.

The work of the Commission is being carried on in conjunction with various clinics in different parts of the state. Clinics for the care of paralytics are established at the Children's Hospital and at the Massachusetts General Hospital, and coöperation has been effected with other hospitals and with other agencies throughout the State.

The work of the Commission is supported entirely by public subscription.

# INDUSTRIAL HYGIENE

The Harvard Medical School is prepared to offer courses of instruction in Industrial Hygiene and facilities to investigate the problems of industry. Boston and its immediate vicinity offers exceptional opportunities for work of this kind. Within a short distance are found a great variety of

industries, and the School has the assurance of sympathetic coöperation through an advisory board of business men.

Under present conditions, instruction and research in industrial hygiene will center about three subjects, chemistry, physiology, and medicine, and in these subjects new departments will be created. In addition to the new facilities so offered, courses will be developed in the pharmacological, sanitary, and social phases of industry, supplementing the work of the School of Public Health.

Fellowships and scholarships are available for those properly qualified.

### COURSES FOR GRADUATES

The object of this Division of the Medical School is to offer graduates in Medicine opportunities to continue their studies in a thorough and scientific manner.

While all courses are intended primarily for those who hold degrees from recognized medical schools, certain courses in the scientific subjects are adapted to the needs of advanced students and teachers of science. Such persons may be admitted to courses on the approval of the Advisory Committee.

Undergraduate students of medicine may be admitted to such courses as they are qualified to take. Special consideration for the needs of such students will be given in the plans for summer courses.

Laboratory facilities at the Harvard Medical School and the abundant clinical opportunities in the various hospitals are available for graduate instruction. Clinical and laboratory instruction will be conducted in small classes so that students may receive personal attention.

The fees for separate courses vary according to the nature of the instruction and the duration of the course. An extra fee is required for the use of material in laboratory, dissecting, and operative courses. A Registration Fee is charged each student, except in the case of "Hospital" Courses, and the Registration Fee entitles a student to register for any number of courses for the period of one year.

All fees are payable in advance at the Office of the Assistant Dean, in charge of Graduate Courses, located in the Administration Building of the Harvard Medical School.

# FELLOWSHIPS AND SCHOLARSHIPS

# FELLOWSHIPS

BULLARD FELLOWSHIPS. In 1891, WILLIAM STORY BULLARD, of Boston, gave the sum of fifteen thousand dollars for the establishment of three fellowships of five thousand dollars each "in memory of three

physicians who were distinguished for their honorable personal character and for their professional services in this community." Accordingly the three following fellowships were established:—

THE GEORGE CHEYNE SHATTUCK MEMORIAL FELLOWSHIP.

THE JOHN WARE MEMORIAL FELLOWSHIP.

THE CHARLES ELIOT WARE MEMORIAL FELLOWSHIP.

The income of the first two is two hundred and seventy-five dollars each, and of the last, three hundred dollars.

The income from any one or all of these fellowships may be paid to any student or member of the medical profession who shall be selected by the Administrative Board of the Medical School to make such original investigations in Medical Science as in their opinion will be most useful to the profession and to the community. The results of such investigations shall not, however, be published as a research performed under the grant of a Bullard Fellowship, unless the work shall have received the approval of the Committee. If published with the approval of the Committee, mention shall be made of the fact that the work was done under a Bullard Fellowship.

Holders of Bullard Fellowships are required to do an amount of work equivalent to not less than ten hours a week throughout the academic year and to present to the Committee at the end of the academic year a report on the amount and result of the work performed.

Applications for the Bullard Fellowships must be handed to the Dean on or before May 1.

EDWARD HICKLING BRADFORD FELLOWSHIP. In 1918, an anonymous donor gave \$25,000 for the establishment of a fellowship in medical research to be known as the Edward Hickling Bradford Fellowship. The Fellowship may be used for research or instruction separately or in connection with any other foundation in such manner as the Corporation may from time to time prescribe. Applications for this Fellowship must be in the hands of the Dean on or before May 1st.

THE JAMES JACKSON CABOT FELLOWSHIP; with an income of three hundred and fifty dollars. In 1906, Arthur T. Cabot, Samuel Cabot, and Guy C. Cabot gave six thousand dollars to establish the James Jackson Cabot Fund in the Medical School. In 1912 Guy C. Cabot added four thousand dollars to this fund. The income remaining after adding a certain percentage to the principal each year is preferably, but not necessarily, to be used for a fellowship "to aid and encourage practical work in scientific medicine."

THE VICTOR EMANUEL CHAPMAN MEMORIAL FELLOWSHIP; with an income at present of eleven hundred and twenty-five dollars. Founded in 1917 by a number of persons who gave jointly the sum of approximately twenty-five thousand dollars in memory of VICTOR EMANUEL CHAPMAN, of New York, of the Class of 1913, who was killed in action over Verdun, June 23, 1916, while a member of the Flying Corps of the French Army. This fellowship is to be assigned to a French youth (or youths) for study in some department of Harvard University. For further particulars, see University Catalogue for 1918–19.

Charles Follen Folsom Teaching Fellowship. In 1908 eleven thousand eight hundred and forty-three dollars and sixty-four cents was given by more than sixty persons in memory of Charles Follen Folsom, A.B. 1862, M.D. 1870, Lecturer on Hygiene, 1877-79, on Hygiene and Mental Diseases, 1879-80, on Mental Diseases, 1880-82; Assistant Professor of Mental Diseases, 1882-85, and Overseer, 1891-1903. It was the desire of the givers that there be established in the Medical School a Charles Follen Folsom Teaching Fellowship in Hygiene or in Mental and Nervous Diseases, and that the incumbent receive the annual income of the fund, or such part of it as may be consistent with the standing rules of the Corporation in such cases. This fellowship, with an income of six hundred and twenty-five dollars, has been assigned to the Department of Hygiene until the further order of the President and Fellows.

Henry P. Walcott Fellowship in Clinical Medicine; with a stipend of one thousand two hundred dollars. Founded in 1910 by Frederick Cheever Shattuck, A.M., M.D., LL.D. "The income to provide for the support of a Fellow in Clinical Medicine, who shall receive his appointment from the Corporation on nomination by the Jackson Professor of Clinical Medicine, who, while the holder of the Fellowship, shall not engage in private practice but devote his time to teaching and clinical research work."

WILLIAM O. Moseley, Jr., Travelling Fellowships; two, with a stipend of one thousand eight hundred and fifty dollars each, for the purpose of studying medicine in Europe. In January, 1912, Mrs. William O. Moseley left a bequest of seventy-four thousand dollars to establish two travelling Fellowships, to be granted annually to two men who have attended the Harvard Medical School for three or four years, and who have given evidence of their diligence and ability, the election of such men to be made by the President and proper officers connected with the Medical School. Applications for these Fellowships must be handed to the Dean on or before May 1st.

ARTHUR TRACY CABOT FELLOWSHIP. In 1913, Dr. and Mrs. Frederick C. Shattuck gave twenty-five thousand dollars for the establishment of a Fellowship in Surgery in memory of Arthur Tracy Cabot, M.D., of the Class of 1872, Fellow of the Corporation. The holder of the Fellowship is not ordinarily to engage in active private practice while holding it but to devote himself to the advancement of Surgery whether in the United States or elsewhere. The nomination to this Fellowship is by preference to be in the hands of the Moseley Professor of Surgery.

Austin Fellowships. Six teaching fellowships, of five hundred dollars each, have been established from the income of the Austin Fund and assigned to the Medical School.

HERBERT L. BURRELL FUND. The income of this fund, amounting to two hundred and sixty dollars annually, is to be devoted to the furtherance, directly or indirectly, of the art and science of surgery. The special disposition of the income of this fund is subject to recommendations of the Dean of the Harvard Medical School.

PROCTOR FUND. A bequest of fifty thousand dollars by Ellen Osborne Proctor for the purpose of promoting the study of chronic diseases. The income of this fund is to be devoted to the care in hospital of persons afflicted with chronic disease, and to investigations into the nature and treatment of the same. The special disposition of the income of this fund is under the control of the heads of the departments of Theory and Practice of Physic, Clinical Medicine, and Pathology.

WILLIAM H. THORNDIKE FUND. The income of this fund, amounting to two hundred and sixty dollars annually, is to be devoted to the furtherance, directly or indirectly, of the art and science of surgery. The special disposition of the income of this fund is subject to recommendations of the Dean of the Harvard Medical School.

#### SCHOLARSHIPS

The Cheever and Haven Scholarships are awarded to students of the first-year class. The Hayden Scholarship may be so awarded. All the other Scholarships are awarded to members of the three upper classes.

EDWARD M. BARRINGER SCHOLARSHIPS. From the estate of Edward M. Barringer, of Schenectady, N. Y., thirty thousand two hundred and thirteen dollars and forty-nine cents has been received as his residuary bequest establishing the "Edward M. Barringer fund." "And I direct that the said 'President and Fellows' forever maintain from the income of said rest and residue (if the same shall be sufficient) two scholarships for students in said Medical School, the annual amount or value of such scholarships to be fixed from time to time by the said President and

Fellows in their best discretion but at not less than \$300 and \$200 respectively; and with such conditions as to them shall seem best, to be called respectively 'Edward M. Barringer Scholarship No. 1,' and 'Edward M. Barringer Scholarship No. 2.'" These scholarships, with the incomes named above, are awarded to deserving students, preferably those of the fourth class.

The Gordon Bartlett Scholarship, established in 1919 by Mr. and Mrs. Donald Gordon in memory of their nephew, Gordon Bartlett, with an income of four hundred and fifty dollars, to be used to assist undergraduates or graduates of the Harvard Medical School in such manner as the Faculty may determine, preference being given to graduates of Dartmouth College. This scholarship will ordinarily be divided between two men. Application should be made to the Dean.

The Matthew and Mary E. Bartlett Scholarship, with an income of four hundred and twenty-five dollars, was founded by Miss Fannie Bartlett of Boston, in memory of Matthew and Mary E. Bartlett, for the benefit of a worthy and meritorious student who is in need of financial assistance.

Lucius F. Billings Scholarship, with an income of two hundred and fifty dollars, was founded in 1900 from a bequest under the will of Lucius F. Billings. The income may be divided between two or more students.

JOHN WHITE BROWNE SCHOLARSHIP. Until further action by the Corporation this Scholarship, with an income amounting to nine hundred dollars, shall be awarded on nomination of the Dean of the Harvard Medical School to a young man of unusual promise to enable him to pursue scientific research for a year in the Harvard Medical School, or elsewhere.

DAVID WILLIAMS CHEEVER SCHOLARSHIP, with an income of two hundred and seventy-five dollars, was founded in 1889 by David Williams Cheever, M.D., LL.D., of Boston, of the Class of 1852. It is to be awarded to a poor and meritorious student of the first year, after three months' probation in the Medical School.

Orlando W. Doe Scholarship. The bequest of Orlando Witherspoon Doe (A.B. 1865, M.D. 1869) was five thousand dollars. One-half of the income derived therefrom, amounting to one hundred and fifty dollars, "is to be given annually as a scholarship to a deserving student in the Medical department."

JOSEPH EVELETH SCHOLARSHIPS. Three Scholarships with an annual income of two hundred dollars each. Founded from the residuary bequest of thirty-seven thousand eight hundred and ninety-seven dollars

and fourteen cents, made by Joseph Eveleth, of Boston, "for aiding deserving and indigent young men in obtaining an education in said College or any of the schools connected therewith." Three Scholarships on this foundation have been assigned to the Harvard Medical School.

HORACE PUTNAM FARNHAM SCHOLARSHIPS. Two Scholarships with an income of two hundred and twenty-five dollars each. Founded in 1918 from a bequest under the will of Mrs. Horace Putnam Farnham as a memorial to her husband, for the benefit of meritorious students of limited pecuniary resources in the Harvard Medical School.

GEORGE HAVEN SCHOLARSHIPS, with an income of eleven hundred dollars, were founded in 1913 from a bequest under the will of George Haven, the income to be used annually for scholarships to deserving students of the first year in the Medical School, the amount of such scholarships to be at the discretion of the Scholarship Committee.

The Lewis and Harriet Hayden Scholarship for colored students was founded in 1894 from a bequest of Mrs. Harriet Hayden. The income, two hundred and seventy-five dollars, may be divided between two or more students.

HILTON SCHOLARSHIPS. Two Scholarships, with an income of two hundred and twenty-five dollars each, were founded in 1897 from a bequest of William Hilton.

WILLIAM OTIS JOHNSON SCHOLARSHIP, with an income of two hundred dollars, was founded in 1912 from a bequest under the will of Mrs. William O. Johnson, in memory of her husband, William Otis Johnson, M.D., of the Class of 1845.

CLAUDIUS M. JONES SCHOLARSHIP, with an income of three hundred and twenty-five dollars, is from a bequest of six thousand dollars by Claudius Marcellus Jones, of the Class of 1866, M.D. 1875.

ALFRED HOSMER LINDER SCHOLARSHIP, with an income of two hundred and seventy-five dollars, was founded in 1895 by Mrs. George Linder. It is to be awarded to a needy student who shall have proven himself to be of sound principles and marked ability.

The Joseph Pearson Oliver Scholarship, with an income of four hundred and twenty-five dollars, was founded in 1904 by patients of the late Joseph Pearson Oliver, M.D. 1871, to be awarded "to such needy and deserving student of the Medical School as the Administrative Board shall annually recommend."

CHARLES B. PORTER SCHOLARSHIP, with an income of two hundred and seventy-five dollars, was founded in 1897 from a bequest of five thousand dollars by William L. Chase.

CHARLES PRATT STRONG SCHOLARSHIP, with an income of two hundred and fifty dollars, was founded in 1894 by friends and patients of the late Charles Pratt Strong, of the Class of 1876, M.D. 1881.

ISAAC SWEETSER SCHOLARSHIP, with an income of three hundred and twenty-five dollars at present, was founded in 1892 by Mrs. Anne M. Sweetser. The income is to be "devoted to the aid of poor students of ability who would not otherwise be able to continue the studies necessary for their profession."

The John Thomson Taylor Scholarship, with an income of two hundred and fifty dollars, was founded in 1899 by Mrs. Frederic D. Philips in memory of her brother, John Thomson Taylor, who died in 1889. He was a student of the Medical School from 1887 to 1889.

EDWARD WIGGLESWORTH SCHOLARSHIP, with an income of two hundred and seventy-five dollars, was founded in 1897 by the family of the late Edward Wigglesworth, of the Class of 1861, M.D. 1865, the yearly income of the fund to be paid to a needy and deserving student of the Medical School whom the Administrative Board shall recommend.

Francis Skinner Fund. A fund of five thousand dollars was established in 1905, the income of which shall be placed at the disposal of the Dean of the Medical School to be used by him in small sums to meet the urgent needs of meritorious students in the payment of term-bills or other expenses. Two hundred dollars is available annually.

This fund remained as an anonymous gift until 1908, when by vote of the President and Fellows of Harvard College it was named the Francis Skinner Fund in honor of the late Francis Skinner, Esq., the donor.

COTTING GIFT. The income of a fund received from the late Dr. Benjamin E. Cotting will be given to such medical student or students as the Administrative Board may select, having regard to the pecuniary needs, intellectual capacity, faithfulness and earnest endeavor, rather than to highest scholarship merely. The amount to be awarded annually will be one hundred and fifty dollars.

JOHN FOSTER FUND. The income of the John Foster Fund, amounting to about one hundred and fifty dollars, is available in alternate years in the Law School and in the Medical School, for one or more meritorious students needing assistance. The next assignment in the Medical School will be made in 1920-21.

THE LOAN FUND OF THE MEDICAL CLASS OF 1879. The Medical Class of 1879 has given the sum of four hundred and thirty-six dollars and seventy-nine cents to be used as a loan fund to aid any student or students in the Medical School in accordance with the request of the Class, or, in the absence of such request, under the direction of the Faculty of Medicine.

Fellowships and Scholarships available in other Departments of the University as well as in the Medical School

THE FREDERICK SHELDON FUND FOR TRAVELLING FELLOWSHIPS AND SCHOLARSHIPS. The income of this Fund is available for holders of any degree from Harvard University. For further particulars, see University Catalogue for 1918-19.

THE CHARLES ELLIOTT PERKINS SCHOLARSHIP; with an income of four hundred dollars, "to be offered each year to a graduate of an Iowa College or University, in any of the graduate or professional departments of Harvard University." The terms of gift are quoted further in the University Catalogue for 1918–19.

THE JAMES A. RUMRILL SCHOLARSHIP; with an income at present of two hundred and twenty-five dollars. This Scholarship, founded in 1909 by Mrs. James A. Rumrill, in memory of her husband, James Augustus Rumrill, of Springfield, Mass., of the Class of 1859, will be offered each year to a properly qualified graduate of a college or university in Virginia, North Carolina, South Carolina, Florida, Georgia, Tennessee or Kentucky. The terms of gift are quoted further in the University Catalogue for 1918–19.

THE PRINCETON FELLOWSHIP; with a stipend of five hundred dollars. From a graduate of Princeton University, to be awarded to a graduate of that University studying in any department of Harvard University.

THE WILLIAM STANISLAUS MURPHY SCHOLARSHIPS; with an income of two hundred and fifty dollars each, founded by WILLIAM STANISLAUS MURPHY, of the class of 1885, to be used for the collegiate education of men of the name of Murphy, who, in the judgment of the faculty prove deserving of this kind of encouragement. These scholarships are available for students in all departments of the University.

Applications should be made to Dean L. B. R. Briggs, the chairman of the Committee on General Scholarships and on the Sheldon Fund.

These scholarships and gratuities are awarded to such men among those applying for and needing assistance as give evidence of having done the best work either in this School or in a preparatory course elsewhere.

Students who have not been able to obtain scholarships often find time and opportunity to do outside work of various kinds in the city.

Information with regard to all forms of pecuniary aid may be obtained from the Director of Scholarships. The Director will aid deserving students in obtaining work. Certain loan funds not enumerated above are at his disposal. Students requiring aid should visit the Director as soon as possible to discuss with him their financial needs. The Director will also

act in advisory capacity with the students in any matters not intimately associated with the curriculum.

Third-year students may apply for scholarships in January; second-year students, in February; first-year students, in March. All applications must be made before May 1.

Applications for the Cheever, Hayden, and Haven Scholarships must be handed to the Director of Scholarships on or before *December 9th*. These scholarships are open only to students who are members of the School at the time of application.

Blank forms, on which all applications for pecuniary aid must be made, may be obtained of the Director of Scholarships.

# **PRIZES**

BOYLSTON MEDICAL PRIZES. These prizes, which are open to public competition, are offered for the best dissertation on questions in medical science proposed by the Boylston Medical Committee.

For 1919 there is offered a prize of three hundred dollars and the Boylston Prize Medal, for the best dissertation on the results of original research in medicine, the subject to be chosen by the writer. The Boylston Prize Medal will be added to the money prize only in case the winning essay shows special originality in the investigations detailed.

Dissertations entered for this prize must be in the hands of the Secretary, H. C. Ernst, M.D., Harvard Medical School, Boston, Mass., on or before December 31, 1919.

In awarding these prizes, preference will be given to dissertations which exhibit original work, but if no dissertation is considered worthy of a prize, the award may be withheld.

Each dissertation must bear, in place of the author's name, some sentence or device, and must be accompanied by a sealed packet, bearing the same sentence or device, and containing within the author's name and residence.

Any clew by which the authorship of a dissertation is made known to the Committee will debar such dissertation from competition.

Dissertations must be printed or typewritten, and their pages must be bound in book form.

All unsuccessful dissertations are deposited with the Secretary, from whom they may be obtained, with the sealed packet unopened, if called for within *one year* after they have been received.

By an order adopted in 1826, the Secretary was directed to publish annually the following votes:—

PRIZES 49

- That the Board does not consider itself as approving the doctrines contained in any of the dissertations to which premiums may be adjudged.
- That, in case of publication of a successful dissertation, the author be considered as bound to print the above vote in connection therewith.

The Boylston Medical Committee is appointed by the President and Fellows of Harvard College, and consists of the following physicians: WILLIAM F. WHITNEY, M.D., Chairman; HAROLD C. ERNST, M.D., Secretary; WILLIAM T. PORTER, M.D., HENRY A. CHRISTIAN, M.D., EDWARD H. NICHOLS, M.D., JOHN WARREN, M.D., REID HUNT, M.D.

The address of the Secretary of the Boylston Medical Committee is Harold C. Ernst, M.D., Harvard Medical School, Boston, Mass.

OTOLOGICAL PRIZE. For the best preparation illustrating the osseous anatomy of the ear or for the best thesis showing original work on an otological subject, a prize of twenty-five dollars is offered, open to fourth-year students.

M. DOUGLAS FLATTERY PRIZE FUND. The income of this fund is to be used for the purpose of giving a Gold Medal and five hundred dollars in cash to the person who may be judged by the President and Fellows to have made a discovery in any branch of science that would result in the greatest good to humanity in the direction of the prevention of disease or the conservation of health in their broadest sense.

OTHER PRIZES. The Bowdoin, Dante, Sumner, and Toppan Prizes, offered by the Faculty of Arts and Sciences, are open to students in all departments of the University. Full particulars in regard to these prizes may be found in the University Catalogue for 1918-19.

DIVISION OF STUDIES

# AND TOTAL NUMBER OF HOURS FOR EACH SUBJECT

FOURTH YEAR	Parteriology   240   Preventive Medicine and Pathology   240   Preventive Medicine and Pathology   240   Preventive Medicine and Pathology   Parasitology   Parasitology   240   Preventive Medicine   240   Preventive Medicine   240   Polyhalmology   240   Parasitology   250   Polyhalmology   250   Polyhalmology   250   Paramacology   250   Pa
Типр Убав	Anatomy   36
SECOND YEAR	Anatomy   316   Anatomy   35   Psychiatry   Anatomy   36   Parthology   320   Parhology   320   Parasitology   472   Demandology   Parasitology   Anatomy   Anatomy
First Year	Anatomy 316 Anatomy  Histology and Embryology 320 Pathology  Biochemistry 280 Parasitology  Neuropathology  Physical Diagnosis  Chinical Pathology  Medical Pathology  Medical Pathology  Surgical Technique  Surgical Technique  Surgery  Neurology  Surgery  Neurology  Neurology  Surgery  Neurology  Surgery  Neurology  Neurology  Obstetrics

\* For a description of the elective courses see page 79.  $\uparrow$  The time allotment for these two subjects may be reversed at the student's option.

# ANNOUNCEMENT OF COURSES

# Anatomy

JOHN L. BREMER, M.D., Associate Professor of Histology.

FREDERIC T. LEWIS, M.D., Associate Professor of Embryology.

JOHN WARREN, M.D., Associate Professor of Anatomy.

David Cheever, M.D., Assistant Professor of Surgery, and Associate in Anatomy.

HARRIS P. Mosher, M.D., Assistant Professor of Laryngology, and Associate in Anatomy.

ALEXANDER S. BEGG, M.D., Instructor in Anatomy, and Demonstrator in Histology.

ROBERT M. GREEN, M.D., Instructor in Anatomy.

Z. BOYLSTON ADAMS, M.D., Instructor in Orthopedic Surgery, and Associate in Anatomy.

RICHARD H. MILLER, M.D., Instructor in Surgery, and Assistant in Anatomy.

Albert A. Shapira, M.D., Instructor in Anatomy.

TORR W. HARMER, M.D., Assistant in Anatomy.

ARCHIBALD M. FRASER, M.D., Assistant in Anatomy.

FRANK A. HAMILTON, M.D., Assistant in Anatomy.

GEORGE A. LELAND, M.D., Assistant in Anatomy and in Surgery.

FRANK W. MARVIN, M.D., Assistant in Anatomy.

GEORGE W. MORSE, M.D., Assistant in Anatomy.

SAMUEL R. MEAKER, M.D., Teaching Fellow in Histology.

RALPH F. SHANER, Ph.B., Austin Teaching Fellow in Histology.

—————, Teaching Fellow in Histology.

# NOTE. — ABBREVIATIONS USED IN THE FOLLOWING PAGES, AND IN THE TABULAR VIEWS

B.C.H.	= Boston City Hospital.	I.H.	= Infants' Hospital (Rotch
B.Co.H.	= Boston Consumptives' Hos-		Memorial).
ę	pital.	McL.H.	= McLean Hospital.
B.D.	= Boston Dispensary.	M G.H.	= Massachusetts General Her
B.S.H.	= Boston State Hospital (Pierce		pital.
	and Austin Farms).	P.B.B.H.	- Peter Bent Brigham How
B.L.H.	= Boston Lying-in Hospital.		pital.
C.H.	= Children's Hospital.	P.D.	= Psychopathic Department,
E. and E.I.	= Massachusetts Charitable		Boston State Hospital.
	Eye and Ear Infirmary.	S.D.B.C.H.	= South Department, Boston
F.H. for W.	= Free Hospital for Women.		City Hospital.
H.M.S.	= Harvard Medical School.	S.O.P.D.	= Surgical Out-Patient De-
H.M.H.	= Huntington Memorial Hos-		partment.
	pital.		

#### COMPARATIVE ANATOMY

— —, James Stillman Professor of Comparative Anatomy.

EDWARD A. BOYDEN, Ph.D., Assistant Professor of Comparative Anatomy.

WILLIS J. BICKFORD, Jr., D.M.D., Assistant in Comparative Anatomy.

ROBERT B. BLACKLER, D.M D., Assistant in Comparative Anatomy.

In the department of Anatomy instruction is given in Anatomy, Comparative Anatomy, Histology and Embryology. The department occupies the Morgan Anatomical Building, the dissecting rooms being in the wing designated BI, and the laboratories for Histology, Embryology, and Comparative Anatomy in the wing BII. There are separate rooms for fourth-year and graduate students and for various kinds of technical work. The class work is carried on by sections in unit rooms, designed to accommodate either twelve or twenty-four students. There is a large library which contains complete files of the most important anatomical and morphological journals, together with many standard works of reference, and in an adjoining room there is a collection of about ten thousand pamphlets. A card catalogue and a classified bibliography give ready access to the literature.

The laboratory offers exceptional facilities for work in human and comparative anatomy and embryology.

The Embryological Collection is a unique feature of the laboratory. It comprises over two thousand series of sections of carefully selected vertebrate embryos, and affords therefore opportunities for research in comparative embryology such as cannot be found elsewhere. The collection includes sixty series of sections of human embryos, several of which are of exceptional value, among them being two of the very youngest stages of man yet obtained. The collection of embryological models contains the standard series and many unique original models.

#### REGULAR COURSES

#### FIRST YEAR

October, November, December, and January

Lectures. Drs. Bremer and Lewis and Warren. Eleven lectures

a week.

Demonstrations. To sections of the class, at the pleasure of the instructors.

Laboratory work. Five and one-half hours, five times a week. 440

These courses are intended to teach human anatomy, both gross and microscopic, together with the essentials of human embryology. Half of the

time is devoted to work in the dissecting room, the other half to work in the histological and embryological laboratories. In the study of gross anatomy, each student makes a complete dissection of one-half of the human body. and all of the class dissect the same part at the same time. Two men will be assigned to the same subject, and will work together during the course. The study of the skeleton is carried on with the dissection, and each student will be provided with a box of bones which may be kept throughout the course. There will be daily lectures and demonstrations which are arranged to correspond as closely as possible with the work in the dissecting room. These lectures not only will serve as a guide to the regular work in the dissecting room, but also will be used to emphasize those details of human anatomy which the student cannot easily study for himself in his own dissection. Special dissections made by prosectors from the second-year class, frozen sections, and various anatomical specimens and preparations will be displayed each day to illustrate and supplement that part of the subject treated in the lecture, or about to be studied in the dissecting room. Students are urged to examine these specimens carefully, and to discuss them informally with the instructors. Students will be guizzed each week on their work in the laboratory by the instructors in charge of their section. There will also be a certain number of written tests on Saturday mornings and one or two oral practical examinations before the final practical examination.

The part of the course dealing with microscopic anatomy is a study of cells, tissues, and organs, from the developmental standpoint. Cell structure and the fundamental tissues are considered first. This is followed by a study of chick embryos of 30 and 48 hours and pig embryos of 40 days, in which special stress is laid on the origin and growth of the different organs. During the remainder of the course the organs of the adult are studied in succession. In connection with the uterus, the human placenta and fetal membranes are considered. The month of January is devoted to the central nervous system and sense organs.

Microscopes. — Every student is strongly urged to purchase a microscope, which is a necessity in this and other courses in the School, and constantly useful in later years. The instructors will gladly advise students in regard to such purchases. Those not thus provided may rent miscroscopes at four dollars for the course.

# Second-Year Anatomy

#### SECOND YEAR

# February and March

HOURS

Laboratory work to sections of the class, four hours per week.

36

The course in second-year anatomy begins on the first of February and lasts for nine weeks. The class will be divided into three sections, and each section will have approximately four hours per week. The work will consist chiefly of the careful study and drawing of selected frozen sections of the human body. Anatomical charts, special dissections, and preparations will be displayed in the laboratory to illustrate the various structures seen in the sections. The drawings are to be handed in at frequent intervals for correction, and they will be discussed with each student. There will be also frequent informal, individual quizzes and discussions as the work progresses. The work in the laboratory is planned to be carried on in close cooperation with the clinical courses in medicine and surgery, and the students are strongly urged to compare the anatomical structures seen in the study of the frozen sections, especially of those through the body cavities, with the conditions found in the physical examination of patients in the hospital wards and clinics. This association between the anatomical laboratory and the clinical courses should be regarded as of great practical importance. The course is also intended to serve as a topographical review of the work of the first year, and there will be a final written examination which will cover the work in both the first and second-year courses in anatomy.

#### ELECTIVE COURSES

A special course in vertebrate embryology is given during the second term; this has been accepted by the Faculty of Arts and Sciences, and is open to students of the academic departments. For this and other electives see page 79.

#### INVESTIGATION

Accommodations are furnished in the laboratory for students who wish to pursue special or advanced work. Special facilities are offered to nvestigators, who will receive such personal aid as may be necessary or advantageous.

# Physiology

Walter B. Cannon, M.D., George Higginson Professor of Physiology.
Cecil K. Drinker, M.D., Associate Professor of Applied Physiology.
Percy G. Stiles, Ph.D., Assistant Professor of Physiology.
Alexander Forbes, M.D., Instructor in Physiology.
Joseph C. Aub, M.D., Instructor in Physiology.
Stanley Cobb, M.D., Instructor in Physiology and in Neurology.
Wallace O. Fenn, Ph.D., Instructor in Applied Physiology.
Jonathan Forman, M.D., Teaching Fellow in Physiology.

DAVID L. RAPPORT, M.D., Austin Teaching Fellow in Physiology.

First Year. — Three principles govern the teaching of physiology.

- 1. Emphasis on the utility of thinking physiologically in medical work.
- 2. Accomplishment of experiments of sufficient refinement to demonstrate the extent to which biological processes can be measured with physical instruments.
- 3. Training in the actual technique of certain physiological measurements which have entered medicine through physiology and which illustrate fundamental physiological facts.

The first of these principles is illustrated constantly in lectures and conferences. Each member of the staff takes part in the lectures, presenting phases of the subject in which his particular interests lie. By such shifts the students meet different points of view, and the narrowness of the usual lecture system is somewhat relieved. Supplementing the lectures there are one and frequently two oral conferences a week, the students being divided into groups of twenty-four for the purpose. By taking these groups in rotation each student is soon known personally by all the instructors, a matter of importance in the coöperation between teacher and student which is essential for good laboratory work.

The construction of the laboratory makes easy and convenient the division of the class into groups of twenty-four men. After six weeks upon nerve and muscle, material valuable for the teaching of general and special physiology as well as for training in the technique of recording, stimulating, etc., the class is divided and throughout the rest of the term the different groups, each in charge of an instructor, are engaged in different fields of physiology. Thus while men in one section perform experiments in alveolar air analysis, those in another section work upon blood pressure and pulse in man, in a third upon blood pressure in the cat, in a fourth upon absorption from the intestine in the cat. To present experiments of true refinement, often elaborate apparatus is required. A

course in medical physiology should place in the hands of the students as many opportunities as possible to use highly accurate apparatus. Such experiments must be subject to ready revision and modification as investigators improve and amplify them, and to permit ready revision it is essential to employ in the different fields of physiology as small a collection of apparatus as is convenient. Alteration of experiments otherwise becomes prohibitive except at rare intervals, and improvements in laboratory instruction do not keep pace with the progress of investigation. The small group method of laboratory teaching meets the demands of an advancing science as no other method can do.

All experiments upon mammals, and most of the experiments carried out upon the students themselves, since they are not directly correlated with the lectures, are preceded by a demonstration of the technique involved in their successful execution. This insures a high percentage of successful results and a speed in carrying through the work which permits the incorporation of many points usually omitted. On the day following the completion of such experiments as those on the control of blood pressure or renal secretion, the entire morning is devoted to a conference upon the results obtained, each group of four men being required to present tracings and answers to the questions which are appended to the experimental directions. A similar morning of review follows each major group of experiments such as those dealing with alveolar air and blood gas analysis.

About ten special demonstrations are given as laboratory exercises to each group of twenty-four men. The anaesthetized animal is brought in, the type of anaesthesia discussed, the operation outlined and performed, and the experiment carried through in such a way that each man can acquaint himself with each step. A running comment from the instructor accompanies these exercises, of which a record must be presented in the laboratory notebook. These books are collected at short intervals, inspected, marked and returned.

During the four-months' term each student receives four fifteen-minute oral examinations, meeting each of his instructors in turn. At the close of the year men whose work has not been of good quality are required to take a more extensive oral examination and the entire class finishes work with a formal written examination. Students who have had, before entering the course, a large part of the laboratory work may be permitted to coöperate with members of the staff in special investigations. Such students may omit certain parts of the laboratory work but are compelled to take all examinations, and to submit notebooks on any required work.

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 81.

# FIRST YEAR (Second half)

HOURS

Laboratory experiments. Drs. Cannon, Drinker, Stiles, Forbes, AUB, FENN, FORMAN, and RAPPORT. Daily.

180

Conferences, written tests, lectures and special demonstrations. Drs. CANNON, DRINKER, FORBES, AUB, FENN, FORMAN, and RAPPORT. 140

# Comparative Physiology

WILLIAM T. PORTER, M.D., LL.D., S.D., Professor of Comparative Physiology.

I. Physiological Research. Students qualified for research will pursue their investigations under the immediate direction of the professor in charge.

II. Physiological Conference. Dr. Porter. Demonstrations with informal discussions of selected problems in physiology. Mondays, 5 to 6 P.M., throughout the year.

Fourth Year. - For a description of the fourth-year courses offered in this department, see page 81.

# Biological Chemistry

Otto Folin, Ph.D., S.D., Hamilton Kuhn Professor of Biological Chemistry.

CYRUS H. FISKE, M.D., Assistant Professor of Biological Chemistry. LAWRENCE J. HENDERSON, M.D., Assistant Professor of Biological

Chemistry.

HSIEN WU, Ph.D., Assistant in Biological Chemistry.

RICHARD D. Bell, M.D., Research Fellow in Biological Chemistry.

HENRY LYMAN, M.D., Research Fellow in Biological Chemistry.

WALTER C. RUSSELL, S.B., Austin Teaching Fellow in Biological Chemistry.

First Year. - The lectures in this course consist of a brief discussion of the theories of chemical constitution and a survey of those classes of chemical substances which are to be found in animals and plants, and of the general principles and more important facts of physiological chemistry.

The laboratory practice is designed to acquaint the student with some of the more important constituents of living matter and their chemical behavior, and with some of the routine methods of biochemical investigation.

Conferences and discussions of selected topics supplement the main work of the course.

Fourth Year. - For a description of the fourth-year courses offered in this department, see page 81.

#### FIRST YEAR (Second half)

HOURS

Lectures. Drs. Folin and Fiske. One hour, five times a week. 80

Laboratory work. Drs. Folin and Fiske. Two and one-half hours,
five times a week. 200

# Bacteriology

- HAROLD C. ERNST, M.D., Professor of Bacteriology.
- S. Burt Wolbach, M.D., Associate Professor of Bacteriology and Pathology.
- CLEAVELAND FLOYD, M.D., Silas Arnold Houghton Assistant Professor of Bacteriology.
- WILLIAM T. BOVIE, Ph.D., Instructor in Bacteriology.
- CALVIN G. PAGE, M.D., Instructor in Bacteriology.
- PHILIP CASTLEMAN, M.D., Instructor in Bacteriology.
- LESLEY H. SPOONER, M.D., Instructor in Bacteriology.
- ALBERT E. STEELE, M.D., Instructor in Bacteriology.
- HORACE K. BOUTWELL, M.D., Assistant in Bacteriology.

Second Year. — Required bacteriology is taught by lectures and practical laboratory work. The lectures treat of the general subject and of methods of practical work. In the laboratory each student has an opportunity to become familiar with the simpler methods of manipulation and staining which are of especial clinical value, and with the more prominent of the pathogenic bacteria.

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 81.

#### SECOND YEAR

HOURS

- Lectures. Dr. Ernst. Daily, except Saturdays, during October, November, and December. 60
- Laboratory work. Drs. Ernst, Floyd, Page, Steele, and Boutwell. Two to three hours daily during October, November, and December.

# Pathology

- WILLIAM T. COUNCILMAN, M.D., LL.D., Shattuck Professor of Pathological Anatomy.
- S. Burt Wolbach, M.D., Associate Professor of Pathology and Bacteriology. Chairman of the Department.
- James H. Wright, M.D., S.D., Assistant Professor of Pathology.
- WARD H. COOK, M.D., Instructor in Pathology.
- ERNEST W. GOODPASTURE, M.D., Assistant Professor of Pathology.

Second Year. - The course in Pathology consists of laboratory work and lectures. The basis of the laboratory work is a systematic course in pathological histology. In connection with this there are demonstrations of fresh material and museum specimens and experiments on animals bearing on the subjects studied. In this work the students are divided into small sections. The demonstrations are given to these sections and the experimental work on anaesthetized animals is carried out by the sections under the direction of Dr. Goodpasture, who superintends this branch of the work. The demonstrations and experimental work are given in rooms adjoining the main laboratory which are adequately provided with apparatus. Both the demonstrations and experiments are in connection with the subjects which are being studied. Lectures are given five days in the week, the object of the lectures being rather to expand and coordinate the knowledge which the student is acquiring by his study of material than to impart new information. During the entire period of the course groups of students are sent to the various hospitals to see and assist in post-mortem examinations. Each group prepares microscopical specimens of the tissues from each autopsy they attend, and immediately afterwards meets for a conference with one of the instructors and the whole case is reviewed and discussed. At these conferences the clinical history of the case is read and as far as possible the pathological findings are correlated with the clinical features. No attempt is made to separate the subject of Pathology into general pathology and pathological anatomy, but the subject is studied as a whole. The more important organs of the body are covered, towards the end of the course, with reference to their special pathology, particularly the blood, liver, spleen, kidneys, pancreas and genitalia. In teaching the student is taught methods of work, is given material, and directed, but he is taught to work independently. Tumors and other material coming from the surgical clinics are made full use of in the course.

On Saturdays conferences and recitations are substituted for the regular laboratory work.

In the forenoons of the third and fourth weeks of January, Drs. Tyzzer and Fabyan give a course of lectures and laboratory exercises on animal parasites, particularly the protozoa and the infections produced by them.

During the afternoons of December and January two courses are given in the special pathology of neurology and surgery; the courses constitute a valuable introduction to the clinical work required in these subjects in the third year.

These courses are: -

- (a) Fifteen demonstrations and laboratory exercises on the pathology of the nervous system. (See Neuropathology.)
- (b) Twenty laboratory exercises in surgical pathology. (See Surgery.)

Third Year. — Clinical pathological demonstrations are held two hours a week throughout the year in the pathological amphitheatre of the P.B.B.H. Autopsy material is presented along with the case records.

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 82.

SECOND YEAR	oυr
Lectures. Drs. Councilman, Wolbach, and Wright. Daily for fourteen weeks, October, November, December, and January (first two weeks only).	8-
Laboratory work. Drs. Councilman, Wolbach, Cook, and Good- Pasture. Three hours daily during the forenoons of October, November, December, and twelve hours a week during first half of January.	25
Demonstrations and laboratory work. Drs. Tyzzer and Fabyan.	
Twelve hours a week, latter half of January.  Demonstration of autopsy material. Dr. J. H. Wright. (M.G.H.)  One hour a week.	2
Demonstration of autopsy material. Dr. Wolbach. (P.B.B.H.). One hour a week.	1
Surgical Pathology. Dr. Nichols. Afternoons in May.	3

#### THIRD YEAR

Clinical pathological demonstrations.	Dr. Wolbach.	(P.B.B.H.)	
Two hours a week, throughout the	vear.		6

# Legal Medicine

GEORGE B. MAGRATH, M.D., Instructor in Legal Medicine.

Third Year. — A systematic course of lectures is given at the Medical School.

Fourth Year. — Optional course; second half-year. (1) Instruction in the pathological conditions met with in death following injury, and in sudden death, by the case method, with special reference to the clinical and the medico-legal aspects in each case. Exercises based on autopsy, with discussion of the case, and held in the post-mortem room of the North Mortuary. (2) Legal Medicine: medicine in its relation to the requirements of law. Systematic lectures (not less than twelve) dealing with matters of importance to the physician, alike as practitioner and as a witness in court.

#### THIRD YEAR

Lectures. Dr. MAGRATH. (H.M.S.) Once a week, second halfyear.

16

# Comparative Pathology

ERNEST E. TYZZER, M.D., George Fabyan Professor of Comparative Pathology.

MARSHAL FABYAN, M.D., Assistant Professor of Comparative Pathology. NATHAN C. FOOT, M.D., Instructor in Comparative Pathology.

Second Year. - A course in Parasitology is given in the mornings of the second, third, and fourth weeks in January. The study of the anatomy and life cycles of the more important species of worms parasitic in the human being is provided for by fresh material for dissection, by stained sections, and by the preserved specimens of the Helminthological Collection. The student is trained to identify these parasites as they appear in the various stages of their development. The diseases of the human being due to parasitic protozoa are also considered with especial reference to their identification and life cycles. Human material, cultures, and experimentally infected animals are utilized in the study of these microorganisms. The ectoparasites, especially those concerned in the production or transmission of human disease, are considered as fully as the allotted time will allow.

Fourth Year. - For a description of the fourth-year courses offered in this department, see page 82.

#### SECOND YEAR

Lectures. Dr. Tyzzer. (H.M.S.) One hour daily, three weeks in January.

12

Demonstrations and laboratory work. Drs. Tyzzer and FABYAN. Twelve hours a week, three weeks in January. 25

# Preventive Medicine and Hygiene

MILTON J. ROSENAU, M.D., A.M., Professor of Preventive Medicine and Hugiene.

JACQUES BRONFENBRENNER, Ph.D., Assistant Professor of Preventive Medicine and Hygiene.

WILLIAM L. Moss, M.D., Assistant Professor of Preventive Medicine and Hugiene.

WOLFERT G. WEBBER, M.D., Instructor in Preventive Medicine and Hygiene, and Edward Hickling Bradford Fellow in Medical Research.

ROBERT W. LAMSON, A.B., A.M., Assistant in Preventive Medicine and Hygiene.

Howard Osgood, M.D., Assistant in Preventive Medicine and Hygiene. Warren T. Vaughan, M.D., Assistant in Preventive Medicine and Hygiene.

Paul F. Orr, M.S., Charles Follen Folsom Teaching Fellow in Hygiene. Ettore Ciampolini, M.D., Fellow in Preventive Medicine and Hygiene.

Third Year. — The course in Preventive Medicine and Hygiene consists of lectures and demonstrations, laboratory work, sanitary survey, and sanitary excursions. The laboratory work includes the bacteriological and chemical analysis of water and milk, the determination of a carbolic coefficient, making a bacterial vaccine, testing fumigants, chemical and physical examination of the air, statistical methods, etc. Each student is required to make a sanitary survey of a city or town and make a report thereon. The sanitary excursions consist of visits to a vaccine and antitoxin laboratory, to a dairy, etc.

Fourth Year. — For a description of the fourth-year course offered in this department, see page 83.

# THIRD YEAR HOURS

32

Lectures and demonstrations. One hour, twice a week, first halfyear. 32

Laboratory and Sanitary Survey. Two hours, once a week, first half-year.

# Industrial Hygiene

DAVID L. EDSALL, M.D., Jackson Professor of Clinical Medicine.

ROBERT W. LOVETT, M.D., John B. and Buckminster Brown Professor of Orthopedic Surgery.

MILTON J. ROSENAU, M.D., Professor of Preventive Medicine and Hygiene.

CECIL K. DRINKER, M.D., Associate Professor of Applied Physiology.
ALICE HAMILTON, M.D., Assistant Professor of Industrial Medicine.
Percy G. Stiles, Ph.D., Assistant Professor of Physiology, and Lec-

turer on Nutrition.

W. IRVING CLARK, Jr., M.D., Instructor in the Practice of Industrial Medicine, and Lecturer on Health Administration in Industry.

WALLACE O. FENN, Ph.D., Instructor in Applied Physiology. HARRY LINENTHAL, M.D., Instructor in Industrial Medicine.

CLARENCE K. REIMAN, D.Sc., Instructor in Applied Physiology.

ROBERT S. QUINBY, M.D., Instructor in the Practice of Industrial Medicine. FRANK E. SCHUBMEHL, M.D., Instructor in the Practice of Industrial Medicine.

WADE S. WRIGHT, M.D., Instructor in Industrial Medicine.

----, Instructor in Industrial Medicine.

Fourth Year. — For special pamphlet describing the electives offered in this Department, communicate with Dr. Drinker, Room 104, Bldg. C.

# Pharmacology

REID HUNT, M.D., Professor of Pharmacology.

WORTH HALE, M.D., Associate Professor of Pharmacology.

RAEMER R. RENSHAW, Ph.D., Assistant Professor of Chemical Research in Pharmacology.

WALTER G. O. CHRISTIANSEN, B.S., Assistant in Pharmacology.

Courses in pharmacology are given in the second and in the fourth years. In the second year the instruction is given by lectures, recitations, demonstrations, and a laboratory course in which the students have an opportunity of learning the physical and chemical properties of the more important drugs and of performing experiments illustrating the physiological actions of a number of these. A few exercises are given in pharmacy and materia medica, the work consisting of demonstrations and practical exercises. Some attention is also given to toxicology. During the fourth year an opportunity is offered to students of doing more advanced work in experimental pharmacology.

Fourth Year. — For a description of the fourth-year course offered in this department, see page 83.

# SECOND YEAR

HOURS

32

Lectures and demonstrations. Drs. Hunt and Hale. One hour,
three times a week, January to April.

48
Lectures, prescription writing and quizzes. One hour, twice a week,
February to April.

24

Laboratory work. Two hours, once a week, January to April.

#### Medicine

Henry A. Christian, M.D., Hersey Professor of the Theory and Practice of Physic. [Absent during 1919-20.]

DAVID L. EDSALL, M.D., S.D., Jackson Professor of Clinical Medicine.

RICHARD C. CABOT, M.D., Professor of Clinical Medicine.

ELLIOTT P. Joslin, M.D., Assistant Professor of Medicine.

EDWIN A. LOCKE, M.D., Assistant Professor of Medicine.

GEORGE R. MINOT, M.D., Assistant Professor of Medicine. FRANCIS W. PEABODY, M.D., Assistant Professor of Medicine. WILLIAM H. ROBEY, Jr., M.D., Assistant Professor of Medicine. CHANNING FROTHINGHAM, M.D., Instructor in Medicine. FREDERICK T. LORD, M.D., Instructor in Medicine. WILLIAM H. SMITH, M.D., Instructor in Medicine. FRANK HUNT, M.D., Instructor in Medicine. JAMES H. MEANS, M.D., Instructor in Medicine. JAMES P. O'HARE, M.D., Instructor in Medicine. CHARLES L. OVERLANDER, M.D., Instructor in Medicine. ARLIE V. BOCK, M.D., Assistant in Medicine. MARTIN J. ENGLISH, M.D., Assistant in Medicine. HYMAN MORRISON, M.D., Assistant in Medicine. WILLIAM R. OHLER, M.D., Assistant in Medicine. FRANCIS M. RACKEMANN, M.D., Assistant in Medicine. HARRY A. NISSEN, M.D., Alumni Assistant in Medicine. HOWARD F. WEST, M.D., Alumni Assistant in Medicine. PAUL D. WHITE, M.D., Teaching Fellow in Medicine.

#### METHODS OF INSTRUCTION

The instruction given by the Department of Medicine consists in lectures, amphitheatre clinics, practical work in the out-patient department and wards of the hospitals, and a thorough course in clinical pathology given at the Harvard Medical School in the laboratory of the Department. The laboratories are equipped for teaching routine clinical laboratory methods to the entire class, as well as for carrying on clinical or experimental medical research.

The general plan of the work will be to instruct the students during the second half of the second year in the methods of history-taking, physical examination, clinical laboratory technique, prescription writing and therapeutics, to drill the students in the third year as assistants in the outpatient departments of the hospitals, and in the fourth year to give them continued contact with patients by having them serve as clinical clerks in the hospital wards. Much of this work will be conducted in small sections, while lectures and amphitheatre clinics will be given for the class with the view of presenting to the students a more comprehensive knowledge of medicine. This instruction will be in part at the Harvard Medical School, in part at the Peter Bent Brigham Hospital, the Massachusetts General Hospital, the Boston City Hospital, and several of the special hospitals. In these hospitals an abundant and varied clinical material is available for the conduct of these various exercises.

HOURS

Second and Third Years.—Lectures and recitations on physical diagnosis, therapeutics and selected medical subjects will be given at the Harvard Medical School, Peter Bent Brigham Hospital, and Massachusetts General Hospital.

Amphitheatre Clinics.— Clinical lectures in which the students are called upon to take an active part will be given in the amphitheatre of the Peter Bent Brigham Hospital and the Massachusetts General Hospital.

Laboratory.—Students will be instructed and exercised in the chemical, microscopical, and bacteriological methods used in the practice of medicine. It is expected that each student by frequent opportunity will attain the necessary proficiency to enable him to utilize these methods in the diagnosis and prognosis of disease.

Clinical Exercises. — Small sections of the class will be drilled thoroughly in the hospitals in the taking of histories, methods of physical examination, and in the examination of urine, blood, sputum, stools, and gastric contents. The section work in physical diagnosis will be conducted in coöperation with the second-year course in anatomy in which the anatomical relations of the thoracic and abdominal viscera are studied in relation to surface markings and physical signs. In the third year the students act as assistants in the out-patient departments of the various hospitals under direct supervision of special instructors.

Clinico-pathological Demonstrations. — In conjunction with the Department of Pathology there will be given at the Peter Bent Brigham Hospital and Massachusetts General Hospital weekly demonstrations and discussions of pathological material. At these exercises the clinical histories of cases will be presented, the diagnoses discussed and then the pathological specimens will be demonstrated in relation to symptoms and physical signs.

SECOND YEAR

### Lectures and recitations on therapeutics and prescription writing. Dr. Edsall. (M.G.H.) Twice a week, second half year. Lectures and recitations on physical diagnosis and history taking. Dr. Robey. (P.B.B.H.) Twice a week, second half year. 32 Clinical Pathological exercises. Dr. Peabody and assistants (P.B. B.H.) Three times a week, second half year. 112 Exercises in sections, physical diagnosis and history taking. Dr. Robey and assistants. (Each student has forty-six exercises.) 69 Clinical Pathologic Physiology Demonstrations. Drs. Minot and Means. (M.G.H.) Twice a week, seven weeks, second half year. 28

THIRD YEAR HOUR	18
Lectures on selected topics. Dr. Cabor. (H.M.S. and M.G.H.)	
Twice a week, throughout the year.	4
Amphitheatre Clinics. Drs. Peabody and Frothingham. (P.B.B.	
H.) Once a week throughout the year.	32
Amphitheatre Clinics. Dr. Edsall. (M.G.H.) Once a week, second	
half year.	6
Lectures and recitations. Dr. Robey. (P.B.B.H.) Once a week,	
first half year.	6
Clinical pathological demonstration. Drs. Cabot and Wolbach.	
(P.B.B.H. and M.G.H.) Once a week throughout the year.	34
Exercises in sections as student assistants in the out-patient depart-	
ments at the M.G.H., B.C.H., or P.B.B.H. Each section has	
forty-eight exercises of three hours each.	4

### FOURTH YEAR

A service of not less than two months as clinical clerk in the medical wards of the M.G.H., B.C.H., or P.B.B.H. is required of each student, except for those who take at least two months in surgery, in which case one month of medicine is required. During this period one week will be spent on tuberculosis patients at the Boston Consumptives' Hospital.

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 84.

### Tropical Medicine

RICHARD P. STRONG, M.D., S.D., Professor of Tropical Medicine. [Absent during 1919-20.]

ANDREW W. SELLARDS, M.D., Assistant Professor of Tropical Medicine. George H. Bigelow, M.D., Instructor in Tropical Medicine.

MONROE A. McIVER, M.D., Assistant in Tropical Medicine.

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 84.

### Surgery

The Department of Surgery includes surgery, clinical surgery, operative surgery, surgical pathology, surgical technique, genito-urinary surgery, roentgenology, and the laboratory of surgical research.

HARVEY CUSHING, M.D., Moseley Professor of Surgery. EDWARD H. NICHOLS, M.D., Professor of Clinical Surgery. CHARLES A. PORTER, M.D., Professor of Clinical Surgery. PAUL THORNDIKE, M.D., Clinical Professor of Genito-Urinary Surgery.

J. Bapst Blake, M.D., Assistant Professor of Surgery.

DAVID CHEEVER, M.D., Assistant Professor of Surgery.

ROBERT B. GREENOUGH, M.D., Assistant Professor of Surgery.

HOWARD A. LOTHROP, M.D., Assistant Professor of Surgery.

CHARLES L. SCUDDER, M.D., Assistant Professor of Surgery.

GEORGE W. HOLMES, M.D., Instructor in Roentgenology.

ROBERT B. OSGOOD, M.D., Instructor in Surgery and in Orthopedic Surgery.

James S. Stone, M.D., Instructor in Surgery.

FREEMAN ALLEN, M.D., Instructor in Anaesthesia.

PERCY BROWN, M.D., Instructor in Roentgenology.

ELLIOTT C. CUTLER, M.D., Instructor in Surgery.

HARRY F. HARTWELL, M.D., Instructor in Surgery.

JOHN HOMANS, M.D., Instructor in Surgery.

WILLIAM C. QUINBY, M.D., Instructor in Surgery, and Director of Laboratory of Surgical Research.

WILLIAM E. LADD, M.D., Instructor in Surgery.

HALSEY B. LODER, M.D., Instructor in Surgery.

RICHARD H. MILLER, M.D., Instructor in Surgery, and Assistant in Anatomy.

Frank L. Richardson, M.D., Instructor in Anaesthesia.

Channing C. Simmons, M.D., Instructor in Surgery.

Robert H. Vose, M.D., Instructor in Surgery.

ARTHUR W. ALLEN, M.D., Assistant in Surgery.

J. Dellinger Barney, M.D., Assistant in Genito-Urinary Surgery.

Horace Binney, M.D., Assistant in Genito-Urinary Surgery.

PATRICK F. BUTLER, M.D., Assistant in Roentgenology.

Ernest G. Crabtree, M.D., Assistant in Genito-Urinary Surgery.

John W. Cummin, M.D., Assistant in Surgery.

HILBERT F. DAY, M.D., Assistant in Surgery.

Samuel W. Ellsworth, M.D., Assistant in Roentgenology.

GILBERT HORRAX, M.D., Assistant in Surgery.

HERBERT H. HOWARD, M.D., Assistant in Genito-Urinary Surgery.

GEORGE A. LELAND, M.D., Assistant in Surgery and in Anatomy.

OSCAR R. T. L'ESPERANCE, M.D., Assistant in Genito-Urinary Surgery.

EDWARD P. RICHARDSON, M.D., Assistant in Surgery.

Beth Vincent, M.D., Assistant in Surgery.

Edward L. Young, M.D., Assistant in Genito-Urinary Surgery.

GEORGE L. CHAFFIN, M.D., Alumni Assistant in Surgery.

CARL T. HARRIS, M.D., Austin Teaching Fellow in Surgery.

George B. Wislocki, M.D., Arthur Tracy Cabot Fellow in charge of the Laboratory of Surgical Research.

### METHODS OF INSTRUCTION

Instruction will be given by lectures, amphitheatre clinics, demonstrations and recitations, together with section teaching in the laboratories of surgical pathology and of surgical research, and in the wards and out-patient departments of the hospitals. Elective courses will be given in the laboratories of the Harvard Medical School and in the wards and operating rooms of the hospitals.

Lectures and demonstrations in the use of the Roentgen Ray will be given in connection with all of the departments of the School when such instruction is desired by the head of the individual department. Arrangements can be made for such instruction with the instructor in roentgenology.

Second Year. — The course will begin in February of the second year — one lecture, one recitation and two clinical lectures a week. The general principles of surgery, beginning with trauma, hemorrhage, sepsis, etc., will be taken up in successive weeks and illustrated by clinical lectures and demonstrations, until the end of the second half of the second year. During the first nine weeks of the second half of the second year, beginning February 1, section work in surgical technique will be given. Each student will have eighteen laboratory exercises of two hours each on the application of bandages and surgical apparatus and the preparation and use of surgical material and dressings.

Third Year. - The course in surgical technique of the preceding year is designed to prepare the student for the required two months "dresser" service in the surgical out-patient departments of the hospitals affiliated with the School. The work of the students apportioned to the three major hospitals will be supervised by an appointee of the department in each hospital. The students will receive their preliminary instruction in roentgenology as a part of these exercises. During the third year, also, one lecture, one recitation and two clinical lectures are given each week. On Wednesday an amphitheatre clinic will be given at the Brigham Hospital at 12.30 p.m., for the whole class. On Tuesday at 12 m., two clinical lectures will be given, one at the Boston City Hospital and one at the Massachussetts General Hospital, to be attended by the students having section work at one or the other hospital. During May twelve surgical hours, in morning and in afternoon exercises, will be devoted to genito-urinary surgery, and sections of the class will be assigned to short terms of service in the Genito-Urinary Departments.

Fourth Year. — A service of two months as clinical clerk in the surgical wards and operating rooms of the M.G.H., B.C.H., or P.B.B.H., is re-

quired of each student, except for those who take two months in medicine, in which case one month of surgery is required.

For a description of the fourth-year courses offered in this department, see page 86.

SECOND YEAR	ours
Laboratory course in Surgical Pathology.* Dr. Nichols. (H.M.S.)  Twelve three-hour exercises during May.	36
Laboratory course in Surgical Therapeutics.* Dr. Cushing and Associates. (H.M.S.) Eight three-hour exercises during Jan-	0.4
uary.  Clinical lectures in connection with the course in Surgical Pathology.*  Dr. Nichols. (B.C.H.) Twelve exercises during May.	24 12
Laboratory course in Surgical Therapeutics. Dr. Osgood and assistants. Eighteen two-hour exercises for each student during the second half year.	36
Lectures and demonstrations. Drs. Nichols and Porter and Associates. (H.M.S.) Once a week, second half-year.	16
Recitations. Drs. Loder and Simmons. Once a week, second half-year.	16
Clinical lectures. Drs. Porter and Greenough. (M.G.H.) Drs. Nichols, Blake, and Lothrop. (B.C.H.) Twice a week, second half-year.	32
THIRD YEAR	
Lectures and demonstrations. Drs. Cushing, Nichols, Porter, and Associates. (H.M.S.) Once a week, throughout the year.	32
Amphitheatre Clinics. Dr. Cushing and Associates. (P.B.B.H.)  Once a week, throughout the year.	32
Clinical lectures given contemporaneously at the M.G.H. and B.C.H. Drs. Porter and Greenough (M.G.H.) or Drs. Nichols, Blake, and Lothrop (B.C.H.). Once a week, throughout the year.	28
Recitations. Drs. Loder and Simmons. (H.M.S.) In sections of half the class, two-hour periods once a week, first half-year.	32
Exercises in Genito-Urinary Surgery, under direction of Dr. Thorn- dike, during May. (B.C.H. and M.G.H.)	12
Case teaching. Dr. Blake. (H.M.S.) Once a week, beginning February 1.	16

<sup>\*</sup> Owing to changes in the curriculum made during the War, these courses cannot be given as heretofore during January, and provision will be made for them later in the year.

Out-Patient Surgical Dresser Service. Exercises in sections, under the general direction of Dr. Day, Boston Dispensary. Dr. Horrax (P.B.B.H.), Dr. Miller (M.G.H.), Dr. Harris (B.C.H.). Each student has forty-eight exercises of three hours each.

Roentgenology. Dr. Holmes. Once a week, February through April.

### FOURTH YEAR

12

A service of not less than two months as clinical clerk in the surgical wards of the M.G.H., B.C.H., or P.B.B.H., is required of each student, except for those who take at least two months in Medicine, in which case one month of surgery is required.

### Pediatrics

JOHN L. MORSE, M.D., Professor of Pediatrics. EDWIN H. PLACE, M.D., Assistant Professor of Pediatrics. CHARLES H. DUNN, M.D., Instructor in Pediatrics. FRITZ B. TALBOT, M.D., Instructor in Pediatrics. HENRY I. BOWDITCH, M.D., Instructor in Pediatrics. MAYNARD LADD, M.D., Instructor in Pediatrics. RICHARD M. SMITH, M.D., Instructor in Pediatrics. PHILIP H. SYLVESTER, M.D., Instructor in Pediatrics. RICHARD S. EUSTIS, M.D., Assistant in Pediatrics. HAROLD A. GALE, M.D., Assistant in Pediatrics. JOSEPH I. GROVER, M.D., Assistant in Pediatrics. ARTHUR A. HOWARD, M.D., Assistant in Pediatrics. WILLIAM W. HOWELL, M.D., Assistant in Pediatrics. KARLTON G. PERCY, M.D., Assistant in Pediatrics. EDWIN T. WYMAN, M.D., Assistant in Pediatrics. JAMES H. YOUNG, M.D., Assistant in Pediatrics. LEWIS W. HILL, M.D., Alumni Assistant in Pediatrics. ALFRED W. BOSWORTH, A.M., Research Fellow in Pediatrics.

Allan R. Cunningham, M.D., Boston Dispensary Research Fellow in Pediatrics.

Third Year.—The material for instruction is drawn from the Infants' Hospital, the Children's Hospital, the South Department of the Boston City Hospital, and from the Children's Departments of the Massachusetts General Hospital and the Boston Dispensary. Lectures and recitations are given on certain selected topics preparatory for the clinical teaching. Clinical lectures are given at the Children's Hospital and at the Infants' Hospital. Section teaching at the bedside and in the out-patient departments of the various hospitals is given throughout the year and comprises

a large proportion of the year's instruction. Bedside instruction and clinical lectures are given at the South Department of the Boston City Hospital, where the students are shown and examine cases of diphtheria, the acute exanthemata and any other contagious diseases which happen to be in the hospital. According as the opportunity arises, the students are instructed in the technique of intubation. By means of the very large amount of pediatric material in the contagious wards, the general subject of Pediatrics as connected with contagious diseases is especially explained and illustrated. Exercises in case teaching are given in the latter part of the year. The students are also given instruction in lumbar puncture and in various laboratory procedures especially applicable to children. In all clinical and section teaching especial attention is paid to clinical therapeutics.

### THIRD YEAR

HOURS

Lectures, recitations or case teaching. Dr. Morse and assistants.

(H.M.S.) Once a week, throughout the year.

32
Clinical lectures. Dr. Morse and assistants. (Ch.H. or I.H.) Once a week, throughout the year.

32
Section Teaching. (Ch.H., I.H., M.G.H., B.D., and S.D.B.C.H.)

Throughout the year. Each student attends twenty-four exer-

cises of three or three and one-half hours each during the year. 72

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 85.

### Dermatology and Syphilology

Charles J. White, M.D., Edward Wigglesworth Professor of Dermatology.

C. Morton Smith, M.D., Assistant Professor of Syphilology.

FREDERICK S. Burns, M.D., Instructor in Dermatology.

E. LAWRENCE OLIVER, M.D., Assistant in Dermatology,

JOHN H. BLAISDELL, M.D., Assistant in Dermatology.

George A. Dix, M.D., Assistant in Syphilology.

HENRY D. LLOYD, M.D., Assistant in Syphilology.

### DERMATOLOGY

Third Year. — A series of twelve introductory lectures, illustrated by the epidiascope, is given during October and November. Section work in clinical dermatology at the Massachusetts General Hospital throughout the year, each section receiving instruction for two weeks from 9.15 pm. to 12 m. daily.

In April and May the class meets for eight hours at the Medical School, the instruction consisting of lectures covering the treatment of all the common, important diseases.

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 89.

### THIRD YEAR

HOURS

36

8

- Lectures. Dr. White. (H.M.S.) Twelve lectures, first half-year. 12
  Lectures on the Therapeutics of the Skin. Dr. White. (H.M.S.)

  Last eight weeks, second half-year. 8
- Section work. Clinical Dermatology. Drs. Burns, Oliver, and Blaisdell. (M.G.H.) Each student attends twelve three-hour exercises.

### SYPHILOLOGY

Third Year. — Lectures and clinical instruction are given at the Massachusetts General Hospital.

### THIRD YEAR

HOURS

- Lectures. Dr. Smith. (H.M.S.) Once a week, December and January.
- Clinical lectures. Dr. Smith. (M.G.H.) Once a week, September 28 to November 23.
- Clinical exercises. Drs. Smith, Lloyd, and Dix. (M.G.H.) Each student attends twelve three-hour exercises, in sections. 36

### Diseases of the Nervous System

The Department of Diseases of the Nervous System is composed of the sub-departments of Neuropathology, Neurology, and Psychiatry.

ELMER E. SOUTHARD, M.D., S.D., Bullard Professor of Neuropathology. EDWARD W. TAYLOR, M.D., Professor of Neurology.

JAMES B. AYER, M.D., Instructor in Neurology.

- , Instructor in Neuropathology.
- \_\_\_\_\_, Instructor in Psychiatry.

STANLEY COBB, M.D., Instructor in Neurology and in Physiology.

CHARLES A. McDonald, M.D., Instructor in Neurology.

GEORGE CLYMER, M.D., Assistant in Neurology.

- ----, Assistant in Neuropathology.
- -, Assistant in Neuropathology.
- , Assistant in Psychiatry.

32

### NEUROPATHOLOGY

Second Year. — The course consists of lectures, laboratory work, and demonstrations, with tests, review exercises, and quizzes as required. A brief review is given of the anatomy required for grasping the pathological physiology of the nervous system. The lectures introduce conceptions of value for the third-year courses in neurology and psychiatry and for the neurological parts of courses in internal medicine and in surgery. The laboratory work is mainly histopathological, dealing with the inflammatory reactions, the classical degenerations, and (in brief) with important entities such as general paresis of the insane and tabes dorsalis. To illustrate the simpler physiological applications of the work, special demonstrations are given to the students in groups at certain State institutions.

### SECOND YEAR

Lectures and laboratory work. Dr. Southard and assistants. January.

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 89.

### NEUROLOGY

Second Year. — Clinical lectures are given at the Massachusetts General Hospital to the entire class, once a week throughout the second half of the year. The object of the course is to give the student a general knowledge of the principles of diagnosis and treatment of diseases of the nervous system as a preparation for later work. The general plan of instruction is (a) Review of the anatomy of the nervous system essential to diagnosis of organic diseases; lectures and demonstrations. (b) Pathological anatomy in its relation to diagnosis; demonstrations of specimens and photographs. (c) Study of cases as they present themselves at the outpatient department of the hospital and in the wards.

Third Year. — Clinical lectures are given during December and May of the third year at the Massachusetts General Hospital. The members of the class are also required to work in the out-patient department in sections throughout the year for which the more didactic teaching of the second year serves as a necessary preparation. This work is practical in character and serves to bring the student into immediate contact with patients.

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 90.

SECOND YEAR

HOURS

Clinical lectures. Dr. Taylor. (M.G.H.) Once a week, second half-year.

16

### THIRD YEAR

Clinical lectures. Dr. Taylor. (M.G.H.) Once a week, November 30 to December 21 and during May.

Section teaching. Each student attends twelve three-hour exercises in Neurology.

### PSYCHIATRY

### THIRD YEAR

During January, February, March, and April a clinical lecture will be given once a week at the Psychopathic Hospital. The different forms of mental disease will be discussed and patients exhibiting the symptoms under consideration will be presented.

During the second half-year a series of eight lectures will be given at the Harvard Medical School. This course is designed to present to the students the modern points of view in regard to mental disease, including the psychoneuroses and mild psychopathic states.

Supplementary instruction is given to the class in small sections in the wards and out-patient department of the Psychopathic Hospital. Each student will examine and report on at least one case of mental disease or defect.

### THIRD YEAR

8

36

HOURS

8

Lectures. Dr. Southard. (H.M.S.) Once a week, eight weeks, second half-year.

Clinical lectures. Dr. Southard and assistants. (P.H.) Once a week, January, February, March, and April.

Section teaching. Each student attends twelve three-hour exercises in Psychiatry. 36

### Obstetrics and Gynaecology

WILLIAM P. GRAVES, M.D., Professor of Gynaecology.

FRANKLIN S. NEWELL, M.D., Professor of Clinical Obstetrics.

ROBERT M. GREEN, M.D., Instructor in Anatomy, and Assistant in Gynaecology.

ROBERT L. DENORMANDIE, M.D., Instructor in Obstetrics.

FRANK A. PEMBERTON, M.D., Instructor in Gynaecology.

MALCOLM STORER, M.D., Instructor in Gynaecology.

James R. Torbert, M.D., Instructor in Obstetrics.

Ernest B. Young, M.D., Instructor in Gynaecology.

FREDERICK L. GOOD, M.D., Assistant in Gynaecology.

JAMES L. HUNTINGTON, M.D., Assistant in Obstetrics.

FREDERICK C. IRVING, M.D., Assistant in Obstetrics.

Delbert L. Jackson, M.D., Assistant in Obstetrics.

FOSTER S. KELLOGG, M.D., Assistant in Obstetrics.

NATHANIEL R. MASON, M.D., Assistant in Obstetrics and Gynaecology.

EDWARD B. SHEEHAN, M.D., Assistant in Gynaecology.

John B. Swift, Jr., M.D., Assistant in Obstetrics.

RAYMOND S. TITUS, M.D., Assistant in Obstetrics.

RICHARD G. WADSWORTH, M.D., Assistant in Gynaecology.

JOHN T. WILLIAMS, M.D., Assistant in Gynaecology.

Delos J. Bristol, Jr., M.D., Alumni Assistant in Obstetrics.

### OBSTETRICS

Third Year.—Instruction is given by lectures, conferences, and clinical teaching. Students are required to take charge, before graduation, of at least twelve cases of labor, under supervision and instruction, to care for their patients during the convalescence, and to make full written reports of the cases.

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 87.

### SECOND YEAR

HOURS

Lectures. Dr. Newell. (H.M.S.) Once a week, second half-year. 16

### THIRD YEAR

Lectures and conferences on Obstetrics. Dr. Newell and assistants. (H.M.S.) Once a week, October; twice a week, November, December, January; Once a week, second half-year.

44

Practical instruction in Clinical Obstetrics. By members of the Department. Throughout the year.

72

### GYNAECOLOGY

Instruction is given by lectures and clinical teaching in the fourth year. Clinics are held in the wards and out-patient departments of the Free Hospital for Women, Boston City Hospital, and Boston Dispensary. The student is instructed in the examination and diagnosis of gynaecological disease, and in the technic of gynaecological operations.

### THIRD YEAR

HOURS

Lectures. Dr. Graves. (H.M.S.) Once a week, April and May.

### FOURTH YEAR

Clinical exercises. Drs. Graves, Pemberton, and Wadsworth (F.H. for W.), Dr. Storer (B.D.), and Drs. Young, Green, Good, Mason, and Williams. (B.C.H.) In sections, throughout the year. Each student attends twelve exercises.

36

Electives. See page 87.

### Orthopedic Surgery

ROBERT W. LOVETT, M.D., John B. and Buckminster Brown Professor of Orthopedic Surgery.

ELLIOTT G. BRACKETT, M.D., Assistant Professor of Orthopedic Surgery.

ROBERT B. OSGOOD, M.D., Instructor in Surgery and in Orthopedic Surgery.

Zabdiel B. Adams, M.D., Instructor in Orthopedic Surgery, and Associate in Anatomy.

LLOYD T. BROWN, M.D., Instructor in Orthopedic Surgery.

HENRY J. FITZ SIMMONS, M.D., Instructor in Orthopedic Surgery.

ARTHUR T. LEGG, M.D., Instructor in Orthopedic Surgery.

FRANK R. OBER, M.D., Instructor in Orthopedic Surgery.

ROBERT SOUTTER, M.D., Instructor in Orthopedic Surgery.

Instruction is given in Orthopedic Surgery by lectures at the Harvard Medical School or Children's Hospital in the second half of the third year, and in the fourth year by clinical exercises at the Children's Hospital and Massachusetts General Hospital.

### THIRD YEAR

HOURS

24

48

Lectures. Dr. Lovett. (H.M.S. or C.H.) Twice a week, February, March; and once a week, April, May.

### FOURTH YEAR

Clinical exercises. Dr. Lovett and assistants. (Ch.H. and M.G.H.) In sections throughout the year. Each student has sixteen exercises.

Electives. See page 86.

### Ophthalmology

— , Williams Professor of Ophthalmology.

ALEXANDER QUACKENBOSS, M.D., Professor of Ophthalmology.

FREDERICK H. VERHOEFF, M.D., Assistant Professor of Ophthalmic Research.

GEORGE S. DERBY, M.D., Instructor in Ophthalmology.

HENRY H. HASKELL, M.D., Instructor in Ophthalmology.

WILLIAM N. SOUTER, M.D., Instructor in Ophthalmology.

Fred M. Spalding, M.D., Instructor in Ophthalmology.

Instruction in Ophthalmology consists of lectures at the Medical School in the fourth year and of clinical exercises devoted to diagnostic methods, diagnosis, and treatment at the Massachusetts Charitable Eye and Ear Infirmary in the fourth year.

### FOURTH YEAR

HOURS

Clinical exercises. Drs. Quackenboss, Haskell, Derby, Souter, and Spalding. (E. and E.I.) In sections, every week during the year. Twelve exercises for each student.

36
Lectures. (H.M.S.) Once a week, first two months.

Lectures. (H.M.S.) Once a week, first two moni Electives. See page 91.

### Otology

Eugene A. Crockett, M.D., Walter Augustus Lecompte Professor of Otology.

CALVIN B. FAUNCE, Jr., M.D., Instructor in Otology.

PHILIP HAMMOND, M.D., Instructor in Otology.

HARRY P. CAHILL, M.D., Assistant in Otology.

OLIVER A. LOTHROP, M.D., Assistant in Otology.

CHARLES T. PORTER, M.D., Assistant in Otology.

FRED A. SIMMONS, M.D., Assistant in Otology.

Instruction is given by lectures at the Harvard Medical School in the fourth year and clinical instruction in the fourth year in sections, each student receiving instruction every morning for two weeks at the Massachusetts Eye and Ear Infirmary with anatomical and histological demonstrations at the Harvard Medical School.

### FOURTH YEAR

Clinical exercises in sections. (E. and E.I.) Every student receives

twelve exercises during the year. 36

Lectures. (H.M.S.) Once a week first two months. 8

Electives. See page 91.

### Laryngology and Rhinology

ALGERNON COOLIDGE, M.D., Professor of Laryngology.

HARRIS P. MOSHER, M.D., Assistant Professor of Laryngology.

HARRY A. BARNES, M.D., Instructor in Laryngology.

JOHN H. BLODGETT, M.D., Instructor in Laryngology.

FREDERICK E. GARLAND, M.D., Instructor in Laryngology.

JOSEPH L. GOODALE, M.D., Instructor in Laryngology.

D. CROSBY GREENE, M.D., Instructor in Laryngology.

GEORGE H. WRIGHT, D.M.D., Assistant in Laryngology.

Instruction consists of lectures in the third year, and in the fourth year each section is assigned for the mornings of two weeks to the clinic of the Massachusetts General Hospital. In addition to clinical instruction, frequent special exercises or demonstrations will be given.

8

Lectures. Dr. Coolidge and assistants. (H.M.S.) Once a week,
April and May.

FOURTH YEAR

Clinical exercises. All members of the department. Twelve exercises for each student.

Electives. See page 91.

### FOURTH-YEAR COURSES

The fourth year is divided into eight periods, or "months," in which each student is required to take not less than three months in courses in which he serves as medical or surgical clinical clerk in hospital wards (Medicine 1, 2 or 3; Surgery 1, 2 or 3), and one month each in Pediatrics and in Obstetrics, one and a half months in the combined course in specialties, and one and a half months in an elective.

The courses of the fourth year are given as full courses, half-courses, and quarter-courses. A half-course occupies the entire day for one month or half the day for two months. A half-course has the value of 144 hours. A quarter-course occupies half the day for one month. One thousand hours of work are required in the fourth year.

In exceptional cases a student may be allowed to substitute one or more electives for required courses of the fourth year. To do this he must present with his choice of courses a petition to the Administrative Board, stating the reasons for the change, and any work which he has done or expects to do in the subjects omitted.

Students must file at the Dean's Office not later than April 1st, on blanks provided for the purpose, their preferences among courses in required subjects and their choice of electives, the Administrative Board reserving the right to modify the selection of the courses chosen by any student.

The order in which a student's courses are arranged is determined by the Assistant Dean.

Changes in the fourth-year schedule are allowed in individual cases by the Administrative Board only when good reason for the change exists and only with the approval of the instructors concerned, which approval should first be secured.

No student may select a fourth-year course covering a subject in the work of the first three years in which he is deficient, without the consent of the head of the Department in writing.

On Fridays throughout the year afternoon work in all courses will be replaced by class exercises.

The nature of the examinations shall be determined by each department, subject to the approval of the Faculty. The student's credit may be based on his daily record of work; on a practical or written examination at the end of his course; or on both.

### REQUIRED COURSES

Medicine 1, 2 or 3.

Pediatrics 1.

Surgery 1, 2 or 3.

Obstetrics 1.

Combined Course:

Gynaecology 1.\*

Orthopedic Surgery 1.

Laryngology 1.\*
Otology 1.

Ophthalmology 1.

### FOURTH-YEAR COURSES ARRANGED UNDER DEPARTMENTS †

ANATOMY.

[Under this Heading are included the Courses in Anatomy, Comparative Anatomy, Embryology, and Histology.]

Anatomy 1. Dr. Cheever and Assistants. Quarter-courses, afternoons, October, December, and February.

This course in applied and surgical anatomy is designed to illustrate the practical applications of anatomy in medicine and surgery. Less important details of general anatomy are studied briefly or omitted altogether, according to their deserts, but opportunity is given to the individual student to pay especial attention to regions in which he is interested. Instruction is chiefly by demonstrations by the instructor and dissection by the student, with the study of specimens, together with informal quizzes. The greatest importance is attached to the verification by the student in his own dissection of the facts presented by the instructor.

Anatomy 2. Advanced Vertebrate Embryology. Dr. Lewis. Half-course, all day, in a month to be arranged with the student.

An elementary knowledge of embryology, such as may be obtained from first-year embryology, is required. Course 5, offered by the Department of Zoölogy of Harvard College, or an equivalent course, is recommended.

\* Those electing Gynaecology 2 or Laryngology 2 may substitute, as part of the combined course, two weeks in Dermatology, Syphilology, or Neurology.

† Given in 1919-20. A pamphlet describing the courses offered for 1921 will be published in March.

This course consists chiefly of laboratory work. There are no lectures, but at appointed times the students meet for directions and for a thorough discussion of the specimens studied. The methods of making graphic and wax reconstructions will be taught, together with the ways of preparing drawings for publication. Reconstructions by both methods, and a certain number of drawings suitable for reproduction, will be required.

Special organs or groups of organs may be studied according to the special needs of the students.

The Manual of Human Embryology, edited by Keibel and Mall, will be used as a text-book, and original publications will be consulted. At the discretion of the instructor students may have access to the extensive embryological collection and to the collection of models, many of which were made in the Harvard Laboratory.

Anatomy 3. Advanced Histology. Dr. Bremer. Half-course, all day, one month, to be arranged with the student.

This course includes the study of the genesis and adult histology of special organs, or groups of organs, according to the needs of the individual student, and the principal methods of histological technic, used in such study.

Anatomy 4. Physical Anthropology. Dr. E. A. Hooton. Half-courses, to be arranged with instructor.

This course is designed to give medical students a comprehensive view of the physical history of man, the relation of man to the Primates, comparative racial anatomy and physiology, growth and proportion, the physical effects of heredity and environment, variation, race mixture, and acclimatization. The attention of students of orthopedics is especially directed to that portion of the course dealing with the development of the erect posture and the biped mode of progression, and to the sections dealing with growth and proportion. The section on human pigmentation is especially important to students of dermatology and tropical medicine. The studies in human variation have a particular interest for students of psychiatry.

The course includes lectures, demonstrations, reading, laboratory work, and special investigations. Opportunity is afforded for work in the osteological department of the Peabody Museum, which contains suitable material for the study of racial, sexual, and individual variations. In the laboratory the student is taught the anthropometrical methods employed in the study of racial groups, and the measurements and observations used in the investigation of delinquents.

### Physiology.

Physiology 1. Half-courses, or quarter-courses, forenoons, afternoons, or all day, throughout the year.

Detailed study in special subjects in physiology. Such study will include preparation of bibliographies, reading of classical papers, repetition of important experiments, and reports on work accomplished.

### Physiology 2. Investigation.

Students properly qualified, who are willing to spend sufficient time in research, will be welcomed into the laboratory and given problems to work upon. During the conduct of their investigations they will receive the counsel and guidance of other investigators working with them.

### COMPARATIVE PHYSIOLOGY.

Comparative Physiology 1. Half-courses, forenoons, afternoons, or all day, throughout the year, by special arrangement.

Students may elect work in any field of physiology. It is to be presumed that such students desire additional work in physiology to fit them for some special field of medicine—for example, the diseases of the nervous system; or they may wish to pursue physiology, pathology, or some other biological science as a profession. They will be received into the research laboratories of the department, and will carry on their studies with the personal assistance of Dr. Porter. The work will consist of fundamental experiments, the study of accessory data, and the reading of selected original investigations. The course is open to qualified persons not students in the Medical School.

### BIOLOGICAL CHEMISTRY.

Biological Chemistry 1. Half-courses, forenoons, afternoons, or all day, June and July, February through May.

### BACTERIOLOGY.

Bacteriology 1. Quarter-course, afternoons, January.

These electives will be of five kinds, including (a) instruction in methods of diagnosis, depending upon bacteriological procedures; (b) instruction in methods of bacteriological diagnosis in use in health board laboratories, including the examination of waters and soils; (c) instruction in methods of opsonic-index work, with practical application; (d) research work in any direction for which the student may be fitted.

Longer courses may include one or the other of these, together with a limited piece of research work.

PATHOLOGY.

Pathology 1. Dr. Wolbach and Assistant. Half-courses, all day, second half-year, and summer months.

This course consists of the study of surgical specimens, attendance at autopsies, and the study of special pathology based upon accumulated material. Instruction in post-mortem technic and histological methods will be given as time permits. Emphasis will be placed upon the interrelation of clinical and pathological work.

Pathology 2. Dr. J. H. Wright. Half-courses, all day, first half-year. This course is given in the pathological laboratory of the Massachusetts General Hospital.

The work consists of (a) training in the technical methods used in pathology; (b) attendance at post-mortem examinations, and the fixation and study of tissues obtained from them; (c) study of the more unusual pathological lesions; (d) research work in any line which a student demonstrates his fitness to pursue.

Pathology 3. Half-courses, mornings or afternoons, throughout the year.

This course is given in the laboratory of pathology, H.M.S., and is open to men acceptable to the head of the department who wish to take up research work in pathological anatomy or in experimental pathology. The problems will be arranged by consultation between students and the head of the department. Not more than two men will be received in any one course.

Pathology 4. Dr. Goodpasture. Half-courses, all day throughout academic year.

This course will consist in the experimental investigation of problems in pathological physiology in progress in the laboratory or to be arranged by conference with Dr. GOODPASTURE. Each course limited to four men, to be selected on the basis of their aptitude and fitness for this work. This course will be available to four special students for two months during each summer.

### COMPARATIVE PATHOLOGY.

Comparative Pathology 1. Dr. Fabyan. Quarter-courses, afternoons, September, October, and November.

Laboratory exercises, assigned reading, and discussions. Technic, theory and use of the various immune reactions and biological products for diagnostic, biological, and clinical purposes. Laboratory animals will be used for the experimental study of toxins, antitoxins, agglutinins, precipitins, opsonins, lysins, complement fixing bodies, and vaccines.

Comparative Pathology 2. Research. Drs. Tyzzer and Fabyan. Properly qualified students may arrange for research in experimental and comparative pathology, for which adequate facilities will be provided. Such work may be undertaken at the convenience of the student.

Comparative Pathology 3. Protozoölogy. Drs. Tyzzer and Fabyan. Quarter-courses, mornings, October, and November.

The course in protozoology will include a general discussion of the morphology and life history of the more important human protozoan parasites, such as the amoebae, flagellata (trypanosomes, the parasites of kala azar and oriental sore), sporozoa (malarial parasites), and ciliata. Their relations to their definitive, and to intermediate hosts will also be discussed, together with phenomena of immunity. Methods for the cultivation of certain parasites and suitable procedures for collecting, staining, and mounting will be discussed.

Comparative Pathology 4. Helminthology. Drs. Tyzzer and Fabyan. Quarter-courses, mornings, December and January.

The course in helminthology will include the differentiation and classification of species and instruction in collecting, preserving, staining, and mounting the parasites and their ova, and experimentation with parasites when possible. The human cestodes, trematodes, and nematodes will be considered in detail. Certain species of the ancanthocephala, the pentastomida, and hirudinea will also be discussed.

### PREVENTIVE MEDICINE AND HYGIENE.

Preventive Medicine and Hygiene 1. Half-course, all day, December.

The students will investigate public health methods in greater detail than is possible in the third-year course, the course being intended for those who desire to investigate some special phase of public health work. The work will include field surveys, epidemiological studies, public health laboratory methods, etc. Each student must make a special investigation of some public health problem.

Arrangements for this course must be made with the head of the Department. The course is limited to four men.

### PHARMACOLOGY.

Pharmacology 1. Half-course, all day, or quarter-courses, mornings or afternoons in April.

The work in this course is designed for students who wish to become familiar with general chemical and physiological methods of detecting poisons, and with chemical and physiological methods of drug assay, or with methods for the detection of food adulterants.

### MEDICINE.

Students must elect one full course (two months) of medicine; or, if they are electing two months of surgery, they must elect one month of medicine. These courses consist of service as clinical clerks in the wards of the three major hospitals.

- Medicine 1. Dr. Edsall and Associates. M.G.H. All day, two months. Limited to eight men in each course.
- Medicine 2. Dr. Frothingham and Associates. P.B.B.H. All day, two months.

Limited to eight men in each course.

Medicine 3. Dr. Locke and Associates. B.C.H. All day, two months. Limited to six men in each course.

### INDUSTRIAL HYGIENE.

Elective courses under the auspices of this Department, which are described in a separate pamphlet, are offered in a variety of subjects. Applicants should communicate with Dr. C. K. Drinker, Room 104, Building C.

### TROPICAL MEDICINE.

Opportunity for the study of tropical diseases, tropical entomology, tropical pathology, tropical bacteriology, and clinical laboratory work, may be taken by special arrangement with Dr. Sellards, who should be consulted by students desiring such courses.

### ROENTGENOLOGY.

Roentgenology 1. Quarter-courses, mornings, October, November, Drs. Holmes, Ellsworth, and Brown.

First Week: General Roentgenology—theory and general practice—application to medicine, surgery, and the special fields principles of interpretation. Massachusetts General Hospital.

Second Week: Roentgenology of the Gastro-Enteric System—fluoroscopy and plate diagnosis—Massachusetts General Hospital.

Third Week: The Roentgenology of Intrathoracic Disease—fluoroscopy and plate diagnosis—with correlation of all evidence for differential diagnosis. Boston City Hospital.

Fourth Week: Roentgen Therapeutics, with a consideration of superficial application and the "deep" technic. Massachusetts General Hospital and Peter Bent Brigham Hospital.

PEDIATRICS.

Pediatrics 1. Prescribed Course. Half-courses, all day, throughout the year.

The work will consist of instruction in the wards and out-patient departments of the Children's Hospital, of the Infants' Hospital, of the Children's Department of the Massachusetts General Hospital, in the contagious wards of the South Department of the Boston City Hospital, at the Children's Tubercular clinic of the Burroughs Place Dispensary, and in the children's wards and out-patient department of the Boston Dispensary. The students will be assigned to the various clinics by the Professor of Pediatrics, and the work will be under his supervision. The mornings will be spent in practical work in the various wards and out-patient departments. Especial instruction will be given at the Infants' Hospital in the examination and preparation of milk modifications in connection with substitute feeding, and here instruction will also be given in connection with the subject of wet nurses.

One afternoon in each week will be spent at the South Department. Here instruction in general pediatrics as connected with contagious diseases will be demonstrated, and whenever possible the technic of intubation will be shown.

The class will be taken to a model farm where everything practical pertaining to the milk supply for infants and young children will be taught. Practical instruction will also be given in a milk laboratory, in the writing of prescriptions, and in the routine of laboratory work.

The examination will be either oral or written, held by the Professor of Pediatrics.

Pediatrics 2. Half-courses, all day, throughout the year.

The required course may be repeated as an elective, the only change being that practical work in the wards and out-patient departments will be substituted for the special work on the modification of milk at the Infants' Hospital and the visits to the model farm and milk laboratory. This course is really a repetition only in name, because, being almost entirely clinical, the patients seen must necessarily be different every month.

Pediatrics 3. Half-courses, all day, throughout the year.

Students who have taken the required course, and shown themselves competent, will be assigned to one of the hospitals under the control of the department, for special practical work in the wards and out-patient departments for periods of one month or longer.

Pediatrics 4. Half-courses, all day, throughout the year.

Students who have taken the required course, and shown themselves competent to undertake original investigations, will be given the opportunity to undertake such investigations under the direction of the instructors in the department, for periods of one month or longer.

### SURGERY.

Students must elect one month of surgery (Course 1, 2, or 3); or, if they are electing only one month of medicine, they must elect two consecutive months of surgery. These courses consist of service in the wards, operating room, and laboratory of the three major hospitals, where the students will act as assistants to the hospital staff.

Surgery 7. Dr. Cushing and Associates. P.B.B.H. All day, one month.

Limited to six men each month.

Surgery 2. Dr. Nichols and Associates. B.C.H. All day, one month.

Surgery 3. Dr. Porter and Associates. M.G.H. All day, one month. Limited to four men each month.

The Department also offers the following electives: -

Surgery 4. Dr. Stone. C.H. Mornings, one month. Children's surgery. Limited to four men each month.

Surgery 5. Dr. Thorndike. B.C.H. Mornings, one month; or, with permission of instructor, all day, one month.

Genito-Urinary surgery.

Surgery 6. — — . M.G.H. Mornings, one month. Genito-Urinary surgery.

Surgery 7. Dr. Quinby. H.M.S. All day, one month. Research.

### ORTHOPEDIC SURGERY.

Orthopedic Surgery 1. Prescribed Course. Afternoons throughout the school year.

This course forms a part of the required combined course.

The exercises are clinical, and are given in the orthopedic clinics and wards of the Children's Hospital and of the Massachusetts General Hospital. The instruction is given daily each afternoon in the week, at 2.30 o'clock, and is so arranged that opportunities are given for the examination of cases, with systematic note taking, combined with instruc-

tion successively in symptoms, diagnosis, the principles and details of treatment, with instruction in the common operations of orthopedic surgery as opportunity offers.

Orthopedic Surgery 2. Quarter-courses, mornings, throughout the year.

This course is offered in the wards of the Children's Hospital, and in the wards and orthopedic out-patient department of the Massachusetts General Hospital, and in the course the student will serve as dresser and assistant, having an opportunity to make the regular visits, to examine and follow the course of operative and non-operative cases, to receive instruction in diagnosis and treatment, to be present at operations, and to receive instruction in the use of plaster of Paris and apparatus. The course will occupy the entire morning.

The course is limited to two men.

Orthopedic Surgery 3. Quarter-courses, afternoons, throughout the school year. In this course the students serve as assistants in the orthopedic out-patient department at the Children's Hospital.

This course is intended for students who have completed Orthopedic Surgery 1.

This course is limited to two men.

### OBSTETRICS.

Obstetrics 1. Prescribed Course. Half-courses, all day, throughout the year.

This course fills one period of the regular fourth-year curriculum. It will be given at the Boston Lying-in Hospital and at the Medical School. During half of the course the student will lodge at the hospital, and devote his time chiefly to attendance on cases in the out-patient clinic. In the course of this work he will be called on to assist at operations in the out-patient department, and will be expected, when his other duties permit, to make ward visits with the physician on duty in the house. In the other half of the course he will conduct the convalescence of the cases delivered by him during his resident service, and make daily ward visits at which clinical instruction will be given in the general management of normal and abnormal labor, in the study of the puerperal convalescence, and in the care of the young infant. Detailed written reports of the out-patient cases attended will be required. His clinical work will be done under the supervision of the department and of the hospital staff on duty, and he will receive careful instruction in the proper methods of delivery and the care of the convalescence. An opportunity will be given each student to study the care of pregnancy in the Pregnancy Clinic, where

instruction in pelvimetry and in diagnosis of presentation and position by external examination will be given. Case teaching on four afternoons during the week will be an important feature of the course. The student will also be given at the Medical School a course of demonstrations in operative obstetrics during the first week of each course, and each student will have an opportunity to perform the different operations on the manikin.

### GYNAECOLOGY.

Gynaecology 1. Prescribed Course. Throughout the year.

As a part of the combined course of the fourth year each student will receive two weeks of clinical teaching in gynaecology during the forenoon of each day. Clinics are held in the out-patient departments of the Free Hospital for Women, Boston City Hospital, and the Boston Dispensary, and the student is instructed in diagnosis and the treatment of ambulatory cases. All students should report for their first exercise at the Free Hospital for Women.

Gynaecology 2.\* Half-courses or quarter-courses, forenoons, throughout the year.

The courses will be given at the Free Hospital for Women by Dr. Graves, assisted by Drs. Pemberton and Wadsworth, and at the Boston City Hospital by Dr. Young, assisted by Drs. Green, Good, Williams, and Mason. An attempt is made in this course to give the student as comprehensive a view as possible of the subject of gynaecology. Diagnosis is taught by a large number of pelvic examinations made in the out-patient department and in the hospital wards. It is designed that the student shall see the patient previous to operation, observe the operation, make daily ward visits, and then have an opportunity to examine the patient at the time of discharge from the hospital.

Operative gynaecology is taught in the operating room, where the various major and minor procedures are demonstrated. Students who show special aptitude are allowed to take some part in the clinical work of the hospital and occasionally in the operations.

Gynaecological pathology is taught by the study of gross specimens taken from the operating room and by drawing from microscopical sections. This department of the course is under the immediate instruction of Dr. F. A. Pemberton at the Free Hospital for Women.

Each student is required to write a thesis on some gynaecological subject. Each course will be limited to sixteen students.

<sup>\*</sup> Those electing this course may substitute dermatology, syphilology, or neurology, in the combined course.

DERMATOLOGY AND SYPHILOLOGY.

Dermatology 1. Quarter-courses, forenoons, October, December, February, and April.

Instruction in clinical dermatology will be given at the Massachusetts General Hospital, both in the out-patient department and in the ward for skin diseases. The work consists of clinical demonstrations and discussions in which the student is required to perform his share. This lasts two and one-half hours a day and afterwards a case is assigned which the student studies and writes upon every evening with the aid of his books. Students electing Course 1 are strongly recommended to elect Course 2.

Dermatology 2. Quarter-course, afternoons, in January.

This course consists of microscopical work and is given on five afternoons a week at the Harvard Medical School. Students electing this course will be trained in the histological study of the commoner diseases of the skin.

Dermatology 3. Half-courses, all day, October, December, February, and April.

Opportunity is offered to one man in each of the above months, throughout the year, to act as assistant house-officer to the out-patient department and skin ward of the Massachusetts General Hospital. Those electing this course will be expected to conform to the rules of the hospital.

Syphilology 1. Quarter-courses, forenoons, throughout the year, beginning in October.

Instruction in clinical syphilis will be given daily at the Massachusetts General Hospital.

Limited to four students per month.

DISEASES OF THE NERVOUS SYSTEM.

Neuropathology 1. Half-courses and quarter-courses, forenoons, afternoons, or all day, throughout the year, preferably the second halfyear.

The case-method is followed. The report of a selected case will be worked up by the student (as if for publication), based upon the personal employment of approved neuropathological methods. The student taking the course on the all-day plan (less conveniently through other plans) is permitted to take part in from ten to twenty autopsies under the Commission on Mental Diseases.

Limited to two during a given month. Consultation with the instructor in advance will secure the choice of a case in line with the student's later special work.

Neuropathology 2. Half-courses and quarter-courses, forenoons, afternoons, or all day, throughout the year.

Clinico-pathological methods in neurology and psychiatry and allied problems of internal medicine and surgery. Students taking this course for several months may, with the consent of the authorities, serve as clinical clerks or laboratory externes in the Psychopathic Hospital, or under special conditions, in other state institutions. Students will be permitted to attend staff conferences at the institutions where their work is carried on. They may be required to submit reports or theses concerning observations made.

The clerkships and externeships are limited to two in a given month. The instructor should be consulted in advance.

Neurology 1. Quarter-courses, forenoons, October to May, inclusive.

The design of these courses is to continue the work of the third year in its practical relations. The aim will be to give the student an opportunity for the independent study of cases. To this end the following methods of instruction in general will be adopted:—

- (1) Daily informal conferences on neurological topics.
- (2) History-taking and personal examinations of patients at the outpatient department of the Massachusetts General Hospital.
  - (3) Assistance in the clinic.
- (4) The preparation of reports bearing on the subjects studied and such original investigation as the time permits, together with a review of the literature bearing on special topics apart from text-books, is urgently advised.

In the final marking much account will be taken of the daily practical work of the student.

Neurology 2. Opportunities will be allowed selected men desirous of giving special attention to neurology with the intention of entering this field of medicine.

Experimental Neurology. Dr. Stanley Cobb. Half-courses or quarter-courses, afternoons, March through May.

A course designed to correlate the anatomy and physiology of the nervous system by reproducing important clinical manifestations of nervous disease in a series of experiments on animal and human subjects.

Psychiatry 1. Half-courses or quarter-courses, forenoons, or all day, throughout the year.

A clinical course in which, by permission of the authorities, the wards and laboratories of the Psychopathic Hospital may be used and the daily

staff-conferences attended. In addition to a complete representation of mental diseases, there is much material of a neurological and general medical interest, so that students are advised to take the work later rather than earlier in the year. Under certain circumstances students taking the course for several months may be appointed to interneships by the hospital authorities.

### SEMINARY IN DISEASES OF THE NERVOUS SYSTEM.

A voluntary weekly conference for all fourth-year students taking electives in neuropathology, neurology, or psychiatry, and for graduate students taking allied courses, has been arranged by the heads of the departments mentioned. The exercises will be partly in the nature of reviews from recent literature, partly clinical or pathological demonstrations, and partly the presentation of theses and reports by students.

### OPHTHALMOLOGY.

### Ophthalmology 1. Prescribed Course.

As a part of the prescribed course, each student will spend forenoons for two weeks in attendance at clinical exercises devoted to diagnostic methods, diagnosis, and treatment, at the Massachusetts Charitable Eye and Ear Infirmary.

### Ophthalmology 2.\* Half-courses, forenoons.

The work will consist of personal instruction in the use of the ophthal-moscope and other instruments of precision. An opportunity will be given to work in the out-patient department of the Massachusetts Charitable Eye and Ear Infirmary and to observe and study cases in the wards. In addition there will be instruction in ophthalmic operations, with opportunity to witness their exemplification in the operative work of the hospital. Limited to four men.

### Ophthalmology 3.\* Quarter-courses, forenoons.

This course will be devoted to instruction in the use of the ophthalmoscope. Limited to four men.

### OTOLOGY.

### Otology 1. Prescribed Course.

For two weeks of the combined course each student will receive clinical instruction in otology, forenoons, at the Massachusetts Charitable Eye and Ear Infirmary.

<sup>\*</sup> Special arrangements may be made for these courses after men have completed Ophthalmology 1.

Otology 2. Quarter-courses, forenoons, October to January.

In this course the student will serve as a volunteer assistant, attending the clinic in the out-patient department of the Massachusetts Charitable Eye and Ear Infirmary, and assisting at operations in the house.

Otology 3. Half-courses, all day, throughout the year, providing proper arrangements can be made.

This course will consist of the work of Otology 1 plus afternoon work as a clinical clerk in the house. In addition to opportunities for the study of cases they will receive instruction in the anatomy, histology, and pathology of the ear.

### LARYNGOLOGY.

Laryngology 1. Prescribed Course.

Forenoons of two weeks of the combined course are devoted to clinical instruction in laryngology and rhinology, with training in the use of instruments at the Massachusetts General Hospital.

Laryngology 2.\* Quarter-courses, forenoons, throughout the year, Massachusetts General Hospital.

These courses enable a student to devote twice as much time to this subject as is given in the combined course. During the first two weeks the work will be the same as in the required course. During the last two weeks the student will act as assistant in the clinic and will be able to study a large variety of cases.

Each course limited to two.

\* Those electing this course may substitute as a part of the combined course two weeks of dermatology, syphilology, or neurology.

### TABULAR VIEW OF UNDERGRADUATE COURSES

# TABULAR VIEW OF UNDERGRADUATE COURSES

### FIRST YEAR - First Half-Year

	Monday	TURSDAY	WEDNESDAY October and November.	THURSDAY	FRIDAT	SATURDAY October to January.
9-10		Anatom; L Histolog	Anatomy. Lecture or Demonstration.  December and January.  Histology and Embryology. Lecture.	tration.		Lecture.
10-1		D Histology	October and November. Anatomy. Dissection. December and January. Histology and Embryology. Laboratory.	boratory.		October to January. Examination or Laboratory.
2-3		Histolog  L  Anatom	October and November. Histology and Embryology. Lecture. December and January. Anatomy. Lecture or Demonstration.	ecture. tration.		
3-5.30		Histology	October and November. Histology and Embryology. Laboratory. December and January. Anatomy. Dissection.	boratory.		

### FIRST YEAR. - Second Half-Year

PHYSIOLOGY. February

TUESD.	AT WEDNESDAY THURSDAY FRIDAY SATURDAY	Lecture or Conference.	Laboratory Experiments or Demonstration.	March, April, May.	Lecture or Conference.	Laboratory Experiments or Demonstration.	Biological Chemistry.	Lecture. Daily except Saturday.	Laboratory and Laboratory.
	TUESDAY		I			I			Laboratory.

### SECOND YEAR. - First Half-Year

JANUARY	Pathology (including Parasitology and Neuropathology)		Neuropathology. Tuesday and Thursday; Friday 2-4.	Pharnacology. Monday and Wednesday; Friday 4-5.
	9-1			F
<b>Висиния</b>		у.	6	
November	Pathology. Laboratory.	Pathology. Lecture. Daily.	Bacteriology. Lecture. Daily except Saturday.	Bacteriology. Laboratory. Daily except Saturday.
Остовяв				
	9-13	12-1	2-3	3-5.30

## SECOND YEAR. - Second Half-Year

FRIDAY SATURDAY	Surgery Medicine M. G. H. Edsall	Division A. Anatomy Division B. Surgery Division C. Medicine	Medicine Lecture Minot and Means		Clinical Pathology Peabody Bldg. D		Pharmacology
<u>F</u>	ΩM		All Divisions Medicine		Clinica Pe Bl		Phari
THURSDAY	Medicine M. G. H. Edsall	Medicine Anatomy Surgery	4	Clinical Pathology Peabody	Bldg. D	Obstetrics Newell Bldg. D	Surgery Bldg, D
Wednesday	Surgery B. C. H.	Division A. Division B. Division C.	Medicine Lecture Minot and Means	Feb., Mar., Apr. Pharmacology May Surgical Pathology	Moh	March April Pharmacology Laboratory Half the class	$May \  ext{Surgical Pathology}$
TUESDAY	Neurology M. G. H. Taylor	Surgery Medicine Anatomy	All Divisions Medicine	Clinical Pathology Peabody	Bldg. D	Medicine P. B. B. II. Robey	Surgery Bldg. D, Room 221
MONDAY	Medicine P. B. B. H. Robey	Division A. Division B. Division C.	All Division Medicine	Feb., Mar., Apr. Pharmacology May Surgical Pathology	Rob	March, April Pharmacology Laboratory Half the class	May Surgical Pathology
	9-10	10-12 Feb. 2 through April 3	10-12 April 5 through May 29	1-2	2-3	3-4	4-5

### THIRD YEAR. - First Half-Year

	Monday	TUESDAY	Wednesday	THURSDAY	FRIDAY	SATURDAY
9-12	Section V	SECTION WORK: Dermatology, Genito-Urinary Surgery, Medicine, Nervous System, Obstetrics, Pediatrics, Section Schedules	Genito-Urinary Surge Surgery, Syphology.	Genito-Urinary Surgery, Medicine, Nervous Surgery, Syphology. See Section Schedules	s System, Obstetrics,	Pediatrics,
12-1 or 12.30-	Medicine P. B. B. H. Peabody or Frothingham	Surgery M. G. H. and B. C. H.	Surgery P. B. B. H. Cushing	Medicine P. B. B. H. Robey	Pediatrics Children's and Infants' Hospitals Morse	Syphilology Sept. 27 to Nov. 15 M. G. H. Smith. Neurology Nov. 22 to Dec. 13 M. G. H. Taylor. Psychiatry. Jon. Psychopathic.
lor1.30			Lunche	Luncheon Period		
2-3	Hygiene	Dermatology Oct., Nov. Syphilology Dec., Jan. Bidg. A	Hygiene	Medicine Cabot	Medicine Cabot	
3-4	Hygiene	Obstetrics Newell Bldg. A, Room 201	Hygiene	Surgery H. M. S.	Clinico-pathological Demonstration	
4-5	Laboratory Surgery Recitation	Pediatries Bldg. A, Room 201	Latoratory Surgery Recitation	Dermatology. Oct. Obstetrics Nov., Dec., Jan. Bldg. A, Room 201	P. B. B. H. and M. G. H.	

### THIRD YEAR. - Second Half-Year

and organization in the Commission of the Commis						
	Monday	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
9-12	Section W	ORK: Dermatology,	SECTION WORK: Dermatology, Genito-Urinary Surgery, Medicine, Nervous System, Obstetrics, Pediatrics,	ry, Medicine, Nervous See Section Schedule	System, Obstetrics, 1	Pediatrics,
12-1 or 12.30- 1.30	Medicine P. B. B. H. Peabody or Frothingham	Surgery M. G. H. and B. C. H.	Surgery P. B. B. II. Cushing	Medicine M. G. H. Edsall	Pediatrics Children's and Infants' Hospitals Morse	Psychiatry Feb., Mar., Apr., Psychopathic Neurology May M. G. H.
1 or 1.30-2			Luncheo	Luncheon Period		
2-3	Orthopedic Surgery Bldg. A, Room 201	Medicine Cabot	Medicine Cabot	Medicine	Legal Medicine Bldg. A, Room 201	
3-4	Surgery Bidg. A,	Pediatrics Bldg. D, Room 221	Psychiatry Feb., Mar. Bldg. A., Room 201 Gynaecology April, May	Orthopedic Surgery Feb., March Bldg. A, Room 201 Laryngology April, May	Clinico-Pathological Demonstration P. B. B. H.	
4-5	Room 201	Obstetrics Bldg. D, Room 221	Surgery Bldg. A, Room 201	Dermatology Bldg, A, Room 201 April, May.	and M. G. H.	

### DEGREES

ON OCTOBER 14, 1918, DEGREES WERE CONFERRED AS FOLLOWS: -

As of the Class of 1918

M.D.

Francis Jervois Callanan, A.B. 1914. George Henry Jackson, Jr. William Bartholomew Young, A.B. 1913.

On March 10, 1919, Degrees were conferred as follows:—

M.D.

Stuart Welsh Adler, Ph.B. (Lafayette Coll.) 1915.

Arthur James Attridge, A.B. (St. Francis Xavier Coll.) 1910.

Warren Gerald Atwood, A.B. (Dartmouth Coll.) 1915.

Vernon Alexander Ayer, s.B. (Clark Univ., Ga.) 1914.

Samuel Ayres, Jr., A.B. (Univ. of Missouri) 1915.

Albert Sidney Beasley, Jr., A.B. (Lincoln Univ.) 1915.

Charles Wesley Blackett, Jr., A.B. (Boston Univ.) 1915.

Wallace Rideout Briggs, A.B. (Univ. of California) 1916.

Carleton Wheeler Bullard, s.B. 1914.

Joseph Hamilton Burnett, A.B. (Yale Univ.) 1916.

Charles Sidney Burwell, Jr., A.B. (Allegheny Coll.) 1914.

Robert Cartwright Cheney, A.B. 1915.

George Vincent Coleman, A.B. (Holy Cross Coll.) 1915.

Kirke Williams Cushing, рн.в. (Kenyon Coll.) 1914, а.в. (Yale Univ.) 1915.

William Lincoln Davis, s.B. (Dartmouth Coll.) 1913.

Joseph Patrick Derby, A.B. (Catholic Univ. of America) 1915.

James Joseph Duffy, A.B. (Holy Cross Coll.) 1915.

Richard Edwin Dunne, A.B. (Catholic Univ. of America) 1915.

Clarence Wyman Fipphen, s.B. (Dartmouth Coll.) 1916.

Patrick Edward Gear, A.B. (Dartmouth Coll.) 1915.

\*Alfred Montgomery Goodale, A.B. 1913.

Phillips Foster Greene, A.B. (Amherst Coll.) 1915.

Gilbert Edmund Haggart, A.B. (Leland Stanford Jr. Univ.) 1915.

William Harris.

Theodore Pomeroy Herrick, A.B. (Yale Univ.) 1915.

Charles Harold Jameson, A.B. 1916.

Harold Richard Kurth, A.B. 1915.

Eugene Thomas Leddy, A.B. 1915.

George Craig Ludlow, A.B. 1915.

<sup>\*</sup> Died, February 21, 1919.

Frederick James Lynch, A.B. (Bowdoin Coll.) 1916.

James Joseph Lynch, Jr., s.B. (Notre Dame Univ.) 1915.

Robert Reyburn McClellan, s.B. (Princeton Univ.) 1914.

Augustine Wilfred McGarry, A.B. (St. Mary's Univ.) 1911.

Donald Cameron McGill, A.B. (Cornell Univ.) 1915.

Charles Louis Martin, E.E. (Univ. of Texas) 1914.

Joe Vincent Meigs, A.B. (Princeton Univ.) 1915.

Chester Rudolph Mills, s.B. (Colby Coll.) 1915.

Ernest Omar Nay.

Paul Nathaniel Neal, A.B. (Trinity Coll., N. C.) 1915.

Francis Chandler Newton, A.B. (Amherst Coll.) 1915.

Denton Gove Nutter, A.B. 1915.

Michael John O'Connor, A.B. (Holy Cross Coll.) 1915.

Dwight O'Hara, s.B. (Dartmouth Coll.) 1915.

Benedict Olch, A.B. (Brown Univ.) 1915.

Grant Palmer Pennoyer, A.B. 1915, A.M. 1916.

Thomas Kinsman Richards, A.B. 1915.

Bruce Bowman Robinson, A.B. (Baker Univ.) 1914, A.M. (Clark Univ.) 1915.

Howard Frank Root, A.B. 1913.

George Gardiner Russell, A.B. 1916.

Harold Rypins, A.B. (Univ. of Minnesota) 1914.

Morris Blackman Sanders, A.B. (Washburn Coll.) 1914.

Francis Barnard Sargent, A.B. 1916.

Charles Wadsworth Schwartz, PH.B. (Yale Univ.) 1914.

Robert Brewster Seabury.

Bartlett Chauncy Shackford, s.B. (Dartmouth Coll.) 1917.

Dwight Lewis Sisco, A.B. (Colorado Coll.) 1913, A.M. (ibid.) 1914.

Ivan Snider, A.B. (George Washington Univ.) 1915.

Bruce Snow, A.B. 1915.

Hartwick Martinus Stang, s.B. (Univ. of Wisconsin) 1916.

Louis Charles Stein, A.B. (Yale Univ.) 1915.

Alfred Julian Steinberg, A.B. (George Washington Univ.) 1914.

Francis Howe Straus, s.B. 1916.

Edward Scanlan Sullivan, A.B. 1914.

William Raymond Supple, A.B. (Boston Coll.) 1915.

Ernest Teh Tso.

Wilfred Douglas Van Stone, A.B. (Colorado Coll.) 1915.

Milton Victor Veldee, PH.C. (Washington State Univ.) 1911, s.B. (ibid.) 1913, s.M. (ibid.) 1914.

Edward Wheeler Wilder, A.B. 1915.

Shu Tai Woo.

William Witter Wright, A.B. (Yale Univ.) 1912.

#### M.D. cum Laude

Arthur Gordon Boggs, A.B. (Dartmouth Coll.) 1915.

Joseph Garland, A.B. 1915.

James Greenough, A.B. 1915.

Samuel Faitoute Haines, s.B. 1915.

Henry Jackson, Jr., A.B. 1915.

William Mason, A.B. 1915.

John Minor, A.B. (Univ. of Virginia) 1916.

Lyman Gilder Richards, A.B. 1916.

Charles Moffett Simpson, A.B. (*Trinity Univ.*, *Texas*) 1914, A.M. (*Harvard Univ.*) 1916.

#### M.D. Magna cum Laude

Robert Frederick Loeb.

Noel Gates Monroe, A.B. (Lawrence Coll.) 1911.

ON COMMENCEMENT DAY, JUNE 19, 1919, DEGREES WERE CONFERRED AS FOLLOWS:—

#### M.D.

Forrest Bertram Ames, A.B. (Univ. of Maine) 1913.

Albert Astrin, A.B. 1911.

Joseph Boch.

John Pollard Bowler, A.B. (Dartmouth Coll.) 1915.

Jesse Brinker Griffith, A.B. (Univ. of Pittsburgh) 1915.

Howard Burr Jackson, A.B. 1915.

Graydon Long, s.B. (Univ. of Rochester) 1912.

Norman Wiley Loud, A.B. 1915.

William Leo MacKedon, s.B. (Univ. of Wisconsin) 1917.

Wilford Merriam Nelson, s.B. (Univ. of Wisconsin) 1917.

Eugene Curtis Peck, A.B. 1916 (1915).

Frank Herbert Rose, A.B. (William Jewell Coll.) 1915.

Kent Tyler Royal, s.B. (Colby Coll.) 1915.

#### M.D. cum Laude

Eliot Hubbard, Jr., A.B. 1915.

#### DR. P.H.

Jacques Bronfenbrenner, PH.D. (Columbia Univ.) 1912. Special Field, Bacteriology.

Thesis, "Studies in the Bacteriology of Food Poisoning."

#### THE MEDICAL SCHOOL

CANDIDATES FOR THE DEGREE OF DOCTOR OF PUBLIC HEALTH Bigelow, George Hoyt, A.B. 1913, M.D. 1916, Brookline Henry, Jonathan Edwards, M.D. (Univ. of Colorado) 1911. Seattle, Wash. Moss, William Lorenzo, s.B. (Univ. of Georgia) 1901, M.D. (Johns Hopkins Univ.) 1905, Athens, Georgia Osgood, Howard, A.B. 1911, M.D. 1917, Boston Sisco, Dwight Lewis, A.B. (Colorado Coll.) 1913, A.M. (ibid.) 1914, M.D. (Harvard Univ.) 1919, Colorado Springs, Colo. Vaughan, Warren Taylor, A.B. (Univ. of Michigan) 1913, M.D. (ibid.) 1916, Ann Arbor, Mich. FOURTH CLASS Adelman, Maurice, A.B. (Brown Univ.) 1916, Providence, R. I. Alexander, William Hamlet, s.B. (Lehigh Univ.) 1916. Allentown, Pa. §Anderson, Howard Taylor (Univ. of Utah and Univ. of Bern), Salt Lake City, Utah Halstead, Kan. Berger, Benjamin Jonathan (Univ. of Kansas). Berman, Saul, A.B. 1916, Roxbury †Blake, Philip Warren (Univ. of Maine), Marlborough †Bloomer, Gaylord Talmadge, A.B. (Univ. of Missouri) 1918, St. Joseph, Mo. Brittingham, Harold Hixon, A.B. (Yale Univ.) 1916, Madison, Wis. Browder, Newton Clarence, A.B. (Butler Coll.) 1916, Indianapolis, Ind. Brown, William Eustis, Ph.B. (Lafayette Coll.) 1909, C.P.H. (Harvard and Mass. Institute of Technology Brookline School of Public Health) 1914, Bulger, Harold Aten, s.B. (Ohio State Univ.) 1916, E. Liverpool, O. Burwell, Edmund Strudwick, Ph.B. (Univ. of North

† Admitted on basis of two years' college work.

Carolina) 1906,

- ‡ Admitted on basis of three years' college work.
- § Admitted on basis of four years' college work (in several cases work for degree completed).

Birmingham, Ala.

1916,

Greene, David Dewey, A.B. 1916 (1917),

Habein, Harold Clinton, s.B. (Carleton Coll.) 1916,

Cabot, Irving Lyman, A.B. (Middlebury Coll.) 1915,	Windsor, Vt.
Carbaugh, Glenn Claiborne, A.B. (William Jewell	
Coll.) 1915,	Kansas City, Mo.
†Carr, Henry Pardee (Univ. of Georgia),	Milledgeville, Ga.
Cheley, Glen Evan, A.B. (Colorado Coll.) 1916, Co	olorado Springs, Colo.
Churchill, Edward Delos, s.B. (Northwestern Univ.)	
1916, A.M. (ibid.) 1917,	Chenoa, Ill.
Clark, James Frederic Wright, A.B. (Boston Univ.)	
1916,	Waltham
Craig, George Mansfield, s.B. (Wesleyan Univ.) 1916,	Middletown, Conn.
Cruff, Frederick Ellery, s.B. (Bowdoin Coll.)1916,	West Roxbury
Daniels, Lewis Ernest, s.B. (Univ. of Michigan) 1911,	Cambridge
Denney, Elliott Stevenson, s.B. (Beloit Coll.) 1915,	Aurora, Ill.
Doherty, Gerald Leo, s.B. (Tufts Coll.) 1916,	Dorchester
Doherty, Henry Leo, A.B. (Boston Coll.) 1916,	Stoneham
Dorrance, Harold Sparrow, PH.B. (Hamilton Coll.)	
1912,	Camden, N. Y.
Dwyer, Philip Roche, A.B. (Boston Coll.) 1916,	Salem
Eisenbourg, Adolphe, s.B. (Mass. Institute of Tech-	
nology) 1912, A.M. (Harvard Univ.) 1914,	Roxbury
Emery, Edward Stanley, Jr., A.B. 1916,	Brookline
†Evans, James Ambrose, A.B. (Univ. of Wisconsin)	
1917,	La Crosse, Wis.
‡Farrington, Paul Robert, A.B. (Univ. of Colorado)	
1917,	Boulder, Colo.
Field, Henry, Jr., A.B. (Syracuse Univ.) 1916,	Marathon, N. J.
Finkel, Henry Sumner, A.B. 1916,	Roxbury
Frasch, Otto Robert, A.B. 1913,	Seattle, Wash.
Friedberg, Emanuel Benjamin, A.B. 1915,	Pittsburgh, Pa.
Fuller, George Lester, A.B. (Tufts Coll.) 1916,	Braintree
Gamble, Clarence James, LITT.B. (Princeton Univ.)	
1914, A.B. (ibid.) 1916,	Pasadena, Cal.
Gayler, Gilbert Ellis, A.B. 1916,	Cambridge
Gile, John Fowler, A.B. (Dartmouth Coll.) 1916,	Hanover, N. H.
Glover, Donald Mitchell, A.B. (Univ. of Illinois)	
1916,	Urbana, Ill.
Goldsmith, Lauren Holmes, s.B. (Univ. of Georgia)	
1010	A + 1 + - C -

Atlanta, Ga.

Waseca, Minn.

Cambridge

<sup>†</sup> Admitted on basis of two years' college work.

<sup>‡</sup> Admitted on basis of three years' college work.

Halliday, Clarence Walter, A.B. (Univ. of Manitoba)	
	nam, Ontario, Can.
Harbin, Robert Maxwell, s.B. (Univ. of Georgia) 1916,	Calhoun, Ga.
Herman, William, A.B. (Yale Univ.) 1912,	Boston
Hitchcock, James, A.B. (Dartmouth Coll.) 1909,	-Cambridge
†Hoeffel, Gerald Norton (Catholic Univ. of America),	Green Bay, Wis.
Joyce, Henry Stephen, A.B. 1916,	Ipswich
†Kelly, Otis Francis (Boston Coll. and Boston Univ.),	E. Boston
†King, Tse (Premedical Department, Harvard Medi-	
cal School of China, and Harvard Coll.), Wi	chang City, China
Kitsis, Henry Hyman, s.B. 1916,	Boston
Lamar, Clifford Lanier, A.B. (Univ. of Alabama) 1916,	Selma, Ala.
Landry, Benedict Bernard, A.B. (Holy Cross Coll.) 1916,	Bristol, Conn.
Leach, Robert Swepson, A.B. (Univ. of Tennessee) 1915,	Wytheville, Va.
†Ling, Wen Ping (Premedical Department of Red Cross	
Medical School and Harvard Medical School of	
China, Inc.),	Hangehow, China
Livingston, William Kenneth, A.B. (Univ. of Oregon)	
1916, а.м. ( <i>ibid.</i> ) 1917,	Alberta, Can.
‡Loh, Ven-tsao (Peking Governmental Univ., Premedi-	
cal Department of Harvard Medical School of China,	
and Harvard Coll.),	Shanghai, China
Looney, Joseph Michael, A.B. 1917 (1916),	Somerville
Lund, Charles Carroll, A.B. 1916,	Boston
Lyon, Don Dee, s.B. (Univ. of Washington) 1914,	Cleveland, O.
McKnight, William Hodges, A.B. (Univ. of Texas) 1916,	Mansfield, Tex.
‡Marble, Howard Bennett (Brown Univ.),	Plainville
Merrill, Earl Stephen, A.B. (Univ. of Maine) 1916,	Orono, Me.
Merrill, Ralph Edward, A.B. (Bates Coll.) 1916,	Patten, Me.
Mudd, Stuart, s.B. (Princeton Univ.) 1916, A.M.	
(Washington Univ.) 1918,	St. Louis, Mo.
Murphy, William Parry, A.B. (Univ. of Oregon) 1914,	Boston
Newton, Harlan Fay, A.B. (Yale Univ.) 1916,	Reading
Odian, Missak Garabed, A.B. (Apostolic Coll.) 1913,	Angora, Turkey
Ogden, Warner, A.B. (Carleton Coll.) 1916,	St. Paul, Minn.
O'Leary, Joseph James, A.B. (Catholic Univ.) 1916,	Haverhill
O'Neil, Eugene Everett, A.B. 1916,	Danvers
Partridge, Winthrop Prescott, A.B. 1916,	Cambridge
Peacock, Thomas Gerald, A.B. (Univ. of Georgia) 1915,	Barnesville, Ga.
Putnam, Tracy Jackson, A.B. 1916 (1915),	Boston

<sup>†</sup> Admitted on basis of two years' college work. ‡ Admitted on basis of three years' college work.

‡Richards, Paul Snelgrove (Univ. of Utah),	Salt Lake City, Utah
†Rigby, Harlo B., s.B. (Univ. of Utah) 1918,	Rexburg, Idaho
Romberg, Eli Charles, A.B. 1914,	Dorchester
Rowell, Hugh Grant, A.B. (Dartmouth Coll.) 1915,	Orleans, Vt.
Rypins, Russel Franklin, A.B. (Univ. of Minnesota) 19	916, St. Paul, Minn.
†Sampson, John Jacob, A.B. (Univ. of California) 1918	, San Francisco, Cal.
Sanford, Clarence Higgins, s.B. 1915,	Allston
§Savage, William Elliott, A.B. (Univ. of Illinois) 1917,	Brighton
†Schmitz, Herbert Walter, s.B. (Univ. of Wisconsin) 1	918, Manitowac, Wis.
†Scudder, Winthrop Davis (Clark Coll.),	Osterville
Sheehan, John Dennis, A.B. (Holy Cross Coll.) 1916,	Worcester
Smiley, Harold Everett, PH.B. (Brown Univ.) 1912,	
s.m. (ibid.) 1913,	Providence, R. I.
Smith, Lawrence Weld, A.B. 1916,	Brookline
Smith, Richard Ilsley, s.B. (Tufts Coll.) 1916,	Auburn, Me.
Soletsky, David, s.B. (Coll. of the City of New York) 1	914, New York, N. Y.
Stillman, Raymond Durgin, s.B. (Bates Coll.) 1916,	Saco, Me.
Storrs, Ralph Warren, s.B. (Trinity Coll.) 1917,	Hartford, Conn.
†Swartz, Jacob Hyams (Tufts Coll.),	Dorchester
Tefft, Richard Carlisle, Jr., A.B. (Yale Univ.) 1916,	Hudson Falls, N. Y.
†Van Den Berg, William John, s.B. (Univ. of Wis-	
consin) 1918,	Menominee, Mich.
Van Liere, Edward Jerald, A.B. (Univ. of Wisconsin)	
1916, s.м. ( <i>ibid</i> .) 1917,	Bristol, Wis.
†Viko, Louis Eindred (Univ. of Utah),	Salt Lake City, Utah
†Weiner, Sidney Hertz (Tufts Coll.),	Roxbury
‡Wheeler, Roy Russell (Cornell Univ.),	Rockville, N. Y.
Wiese, Walter John, A.B. (Yale Univ.) 1916,	Meriden, Conn.
Wiggin, Sidney Cushing, s.B. (Tufts Coll.) 1916,	Roxbury
Wilson, Edward Harlan, s.B. (Dartmouth Coll.) 1915,	Columbus, O.
‡Wolfsohn, Mast (Univ. of California),	San Francisco, Cal.
Wood, Russell, A.B. 1916,	New Bedford
Yoakam, Wayne Addison, s.B. (Denison Univ.) 1916,	Homer, O.
THIRD CLASS	

THIRD CLASS	
Anderson, John Gordon, s.B. (Rhode Island State Coll.)	
1917,	Westerly, R. I.
‡Angle, Edward Everett Dupuytron, A.B. (Univ. of	
Nebraska) 1918,	Lincoln, Neb.

<sup>†</sup> Admitted on basis of two years' college work.

<sup>‡</sup> Admitted on basis of three years' college work.

<sup>§</sup> Admitted on basis of four years' college work (in several cases work for degree completed).

Dorchester Hamilton, N. Y.

Worcester

Waltham

Bagusin, Alexis Matthew, A.B. (Univ. of Illinois) 1915, Boston †Bates, George Campbell (Lake Forest Univ.), Lake Forest, Ill. Bauman, Clair Sylvester, s.B. (Pennsylvania State Coll.) 1918, Lock Haven, Pa. §Benjamin, Aubrey Crane, A.B. 1918, Dorchester Blaisdell, Charles Byron, A.B. 1918 (1917), Long Branch, N. J. Blumgart, Herrmann Ludwig, s.B. 1918 (1917). Allston Bouvé, Howard Allston (Tufts Coll.), Wakefield Boyd, Howard, s.B. (Allegheny Coll.) 1915, Meadville, Pa. Buck, Robert William, A.B. (Butler Coll.) 1914, A.M. (Columbia Univ.) 1915, Indianapolis, Ind. Byers, Randolph Kunhardt (Harvard Univ.), North Andover Castle, William Bosworth (Harvard Univ.), Belmont Chamberlain, Herbert Ezra, A.B. (Albion Coll.) 1916, Highland Park, Mich. Chapman, Edward Northrop, A.B. (Yale Univ.) 1917, New London, Conn. †Chipman, Willard Alonzo, s.B. (Univ. of Wisconsin) 1919. Stoughton, Wis. Crisler, Joseph Augustus, Jr., s.B. (Univ. of Virginia) Memphis, Tenn. 1917. Crumrine, Clarence Acklin, A.B. (Washington and Jefferson Coll.) 1917, Washington, Pa. Curran, Jean Alonzo, A.B. (Carleton Coll.) 1916, Northfield, Minn. Di Leone, Ralph, A.B. (Brown Univ.) 1917, Providence, R. I. Dumphy, John Joseph, A.B. (Holy Cross Coll.) 1917, Springfield Dunphy, John Joseph, Jr., A.B. (Holy Cross Coll.) 1917, Worcester †Eisaman, Jo Reamer, Jr., s.B. (Dartmouth Coll.) 1919, Greensburg, Pa. †Escabi, José, s.B. (Univ. of Wisconsin) 1919, Mayagiiez Everett, Winchester Winslow, A.B. 1917, Newton Upper Falls Fisher, David, A.B. 1917, New York, N. Y. Worcester Fitchet, Seth Marshall, A.B. (Clark Univ.) 1915, Foster, Daniel Parsons, A.B. (Univ. of California) 1917, A.M. (ibid.) 1919, Portland, Ore. ‡Fremont-Smith, Frank, Jr. (Harvard Univ. and Mass. Institute of Technology), Boston

† Admitted on basis of two years' college work.

Guller, Erastus Ingham, A.B. (Colgate Coll.) 1917,

Haire, Paul Gregory, A.B. (Clark Univ.) 1917,

Harrington, Winthrop Wendell, A.B. 1917,

†Grund, Jacob Leon (Tufts Coll.),

<sup>‡</sup> Admitted on basis of three years' college work.

<sup>§</sup> Admitted on basis of four years' college work (in several cases work for degree completed).

Hopkins, John Edward, A.B. (Boston Coll.) 1916,	Lawrence
†Hough, Garry de Neuville, Jr., s.B. (Wesleyan Univ.) 1	
†Hu, Cheng Hsiang (Nanyang Coll. and Harvard Univ.)	
Hughes, William Newton, A.B. (Brown Univ.) 1916,	, rusin, ciina
A.M. ( <i>ibid</i> .) 1917,	Manton, R. I.
Jones, Stephen George, A.B. 1917,	Arlington
Joslin, Doyle, A.B. (Colorado Coll.) 1917,	Rock Springs, Wyo.
Katz, Henry, A.B. (Yale Univ.) 1917,	Hartford, Conn.
†Kazanjian, Varaztad Hovhanes, D.M.D. (Harvard Univ.	
Kennedy, Benjamin Hughes, Jr., A.B. (Univ. of	,,
Alabama) 1916,	Birmingham, Ala.
Lane, John Thomas, A.B. (Boston Coll.) 1917,	' Cambridge
Liebman, Charles, Ph.B. (Yale Univ.) 1917,	New Haven, Conn.
Locke, Allen Winch, A.B. (Dartmouth Coll.) 1917,	Rutland, Vt.
	Oklahoma City, Okla.
†Lugitch Maurice (Tufts Coll. and Harvard Univ.),	Boston
Luther, Eliot Horton, A.B. (Brown Univ.) 1917,	Providence, R. I.
Lydon, Cyril Michael, A.B. (Boston Coll.) 1917,	North Abington
McConnell, William Ethelbert, s.B. (Allegheny Coll.) 1	
†Macdonald, Maxwell Eugene (Univ. of Maine),	Bangor, Me.
McGarrahan, John Cooley, A.B. (Amherst Coll.) 1917,	Cohoes, N. Y.
†McMurrey, Allen Lamar, s.B. (Univ. of Texas) 1919,	Houston, Tex.
‡Mallory, Tracy Burr (Harvard Univ.),	Brookline
Manuel, William Frederick, A.B. (Bates Coll.) 1915,	Hamilton, Me.
†Marx, Frederick William, s.B. (Univ. of Michigan) 191	
Meade, Richard Hardaway, Jr., s.B. (Univ. of Vir-	,
ginia) 1917,	Richmond, Va.
Merwarth, Harold Russell, A.B. (Lehigh Univ.) 1917,	Easton, Pa.
Miller, Frederic Munger, Jr., s.B. (Hamilton Coll.) 191	
Nelligan, Thomas Hayes, A.B. (Amherst Coll.) 1917,	Amherst
Nichols, Alvord Gates, A.B. (Colgate Univ.) 1916,	Boston
Noyes, Harold Greeley, A.B. 1914 (1915), A.M. 1915,	Newtonville
O'Brien, Thomas Francis, A.B. (Holy Cross Coll.) 1917.	, Worcester
†Ogilvie, John Horn, A.B. (Univ. of Missouri) 1919,	Charleston, Mo.
Patman, William Louis, A.B. (Univ. of Georgia) 1917,	Athens, Ga.
Pratt, Aaron Paul, A.B. (Clark Univ.) 1913, C.P.H.	
(Harvard Univ. and Mass. Institute of Technology	
School of Public Health) 1916,	Brighton
Rees, Henry Maynard, A.B. (Yale Univ.) 1913,	Cleveland, O.

<sup>†</sup> Admitted on basis of two years' college work. ‡ Admitted on basis of three years' college work.

Providence, R. I.

Roxbury Spencer, Neb.

Reese, Algernon Beverly, Jr., s.B. (Davidson Coll.) 1917, Charlotte, N. C.
‡Ryan, Robert Raymond, A.B. (Dartmouth Coll.) 1918, E. Weymouth
Ryley, Harold William, A.B. (Brown Univ.) 1917, New London, Conn.
Scaiefe Benjamin Franklin, Jr., A.B. (Univ. of Oregon) 1917, Eugene, Ore.
†Schneiders, Edwin Frank, s.B. (Univ. of Wisconsin)
1918, s.m. (ibid.) 1919, Marathon, Wis.
Sevringhaus, Elmer Louis, A.B. (Univ. of Wisconsin)
1916, A.M. ( <i>ibid.</i> ) 1918, New Albany, Ind.
Shea, Francis Xavier, A.B. (Holy Cross Coll.) 1917, Everett
†Shir, Morris (Tufts Premedical School and Harvard Univ.), Dorchester
Shukle, Revashanker Maganlal, PH.G. (Mass. Coll. of
Pharmacy) 1915, A.B. (Clark Coll.) 1917, Bombay, India
Smith, Frank Raymond, A.B. (Yale Univ.) 1917, Stratford, Conn.
Snelling, Pinckney Welch, A.B. (Univ. of Georgia) 1917, Athens, Ga.
†Sonnenburg, Willard Michael, s.B. (Univ. of Wis-
consin) 1919, Sheboygan, Wis.
†Stahl, Fred Arthur, A.B. (Univ. of Missouri) 1919, Garden City, Mo.
Stater, Wayne J., A.B. (Univ. of Oregon) 1917, McMinnville, Ore.
Sutton, Lee Edwards, Jr., s.B. (Virginia Polytechnic
Inst.) 1914, Richmond, Va.
†Sutton, Robert Mage, s.B. (Univ. of Wisconsin) 1919, Peoria, Ill.
†Sweetser, Horatio Bartholomew, Jr., s.B. (Univ. of
Minnesota) 1919, Minneapolis, Minn.
‡Sziklas, Charles, A.B. (Western Reserve Univ.) 1919, Budapest, Hungary
†Taylor, Joseph Vincent, s.B. (Univ. of Wisconsin)
1916, s.m. (ibid.) 1917, Marple, Neb.
†Thorndike, Augustus, Jr. (Harvard Univ.), Boston
†Thurman, Aaron (Tufts Coll. and Harvard Univ.), Dorchester
Toot, Joseph Frederick (Oberlin Coll.), E. Liverpool, O.
Towlerton, Fletcher Johnson, A.B. 1917, Lyons, N. Y.
Townsend, James Harvey, A.B. 1917, Newton
‡Vela, Francisco (Ateneo Fuente), Mexico City, Mex.
Vickers, Denver, A.B. (Colorado Coll.) 1917, Colorado Springs, Colo.
Washburn, Alfred Hamlin, A.B. (Amherst Coll.) 1916, Boston
‡Webber, Samuel Rideout (Harvard Univ.), Calais, Me.

Weyler, Henry Leon Cohen, PH.B. (Brown Univ.) 1916,

†White, William Allen, Jr., s.B. (Dartmouth Coll.) 1919,

Whitehorn, John Clare, A.B. (Doane Coll.) 1916,

<sup>†</sup> Admitted on basis of two years' college work.

<sup>‡</sup> Admitted on basis of three years' college work.

<sup>§</sup> Admitted on basis of four years' college work (in several cases work for degree completed).

§Wilson, Ralph Rust, A.B. (*Univ. of Missouri*) 1917 (1919), Richmond, Mo. Woodbridge, Philip Dudley, A.B. 1917, Cambridge Young, Clark, A.B. (*Univ. of Utah*) 1917, Salt Lake City, Utah

#### SECOND CLASS

Albert, Simon, A.B. 1918 (1917),	Malden
Baker, Henry, s.B. 1917,	Dorchester
§Barton, Basil Egbert, A.B. 1919,	W. Roxbury
Benton, Roy Wilmot, PH.B. (Brown Univ.) 1918,	New Bedford
†Bixby, Harry Irving (Harvard Univ.),	Holbrook
†Boyd, Douglas, Jr. (Univ. of Georgia),	Griffin, Ga.
‡Brunswick, David (Harvard Univ.),	New York, N. Y.
Caner, George Colket, A.B. 1917,	Manchester
Champ, Anthony Marius, A.B. (Clark Coll.) 1915,	Randolph
§Christian, Thomas Davis, Jr. (Randolph-Macon Coll.),	Lynchburg, Va.
†Chung, Mon-Fah (Harvard Univ.),	Honolulu, Hawaii
†Constantine, Charles Ezra (Univ. of Nebraska),	Roxbury
Creed, John Patrick, A.B. (Boston Coll.) 1918,	Haverhill
Daniels, George Eaton, s.B. (Dartmouth Coll.) 1918,	Fitchburg
†Davidoff, Leo Max (Harvard Univ.),	Chelsea
Davis, Hallowell, A.B. 1918,	Brookline
†Dunham, Rand Augustus (Bowdoin Coll.),	Rumford, Me.
‡Dunphy, Edwin Blakeslee, War Diploma (Prince-	
ton Univ.),	Newark, N. J.
Ernlund, Carl Helge, A.B. (Coll. of Lund) 1911, D.M.D.	
(Harvard Univ.) 1917,	Brunsta, Sweden
†Everett, Ernest Alfred (Univ. of Nebraska),	Lincoln, Neb.
†Farnsworth, Kenneth Clyde (Univ. of Maine),	Islesford, Me.
Findlay, Francis McRae, A.B. (Park Coll.) 1918,	Parkville, Mo.
Fishback, Frederick Coleman, A.B. 1919 (1918),	Washington, D. C.
†Flashman, David Harry (Mass. Institute of Technology)	, Roxbury
Fray, Walter Wendell, s.B. (Syracuse Univ.) 1916,	
s.m. (ibid.) 1917,	Catskill, N. Y.
Gardner, Stuart Needham, A.B. 1917,	Peabody
Garfield, Stanton, A.B. (Williams Coll.) 1917,	Williamstown
Garside, Francis Vincent, A.B. (Brown Univ.) 1918,	Providence, R. I.
‡Glazier, James Raymond, PH.G. (Univ. of Pittsburgh) 19	14, Belpre, O.
§Glover, John Lamson (Boston Univ. and Harvard Univ.)	, Ipswich

<sup>†</sup> Admitted on basis of two years' college work.

<sup>‡</sup> Admitted on basis of three years' college work.

<sup>§</sup> Admitted on basis of four years' college work (in several cases work for degree completed).

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Goldberg, Bernard Isadore, s.B. (Tufts Coll.) 1918,	Roxbury
Goldman, Joseph, A.B. 1918,	Boston
Goldsmith, Leon Albert, A.B. (Reed Coll.) 1918,	Portland, Ore.
†Goodrich, Howard Brant (Williams Coll.),	Brooklyn, N. Y.
‡Gordon, Donald Covil (Wesleyan Univ.),	Hazardville, Conn.
Hackett, Edward Valentine, A.B. (Holy Cross Coll.) 1918	Worcester Worcester
§Haggart, William Waugh (Leland Stanford Jr. Univ.	
and Harvard Univ.),	Durango, Colo.
Hagstrom, Henry Theodore, рн.в. (Brown Univ.) 1917,	Youngstown, O.
Harper, William Frantz, s.B. (Univ. of Alabama) 1918,	Selma, Ala.
Hoffman, Arthur Max, A.B. (Reed Coll.) 1918,	Portland, Ore.
†Hopkins, Heywood Hill (Univ. of Georgia),	Thomasville, Ga.
†Horsley, John Shelton, Jr. (Univ. of Virginia),	Richmond, Va.
Hudson, Royal Carlton, s.B. (Rhode Island State Coll.) 1	915, Phenix, R. I.
Kahn, George, s.B. (Mass. Institute of Technology) 1919,	Dorchester
‡Kendrick, Thomas Paul (Catholic Univ. of America),	Brookline
‡King, William Aldrich (Brown Univ.),	Woonsocket, R. I.
Kneedler, M. Weir, s.B. (Univ. of Pittsburgh) 1916,	Bellevue, Pa.
†Kopel, Moses (Harvard Univ.),	Malden
‡Lebowitch, Richard Jacob (Tufts Coll.),	Roxbury
Levenson, Walter Sabin, A.B. 1919,	Roxbury
Loring, Robert Edward Lee (Clark Coll. and Dart-	
mouth Coll.),	Shrewsbury
McKinnon, Donald Sykes, Ph.B. (Yale Univ.) 1918,	Springfield
Maclachlan, Kenneth Long, A.B. 1918,	Melrose
McLeod, Ralph Collingwood, A.B. 1918,	Brockton
†Marquis, W. James, Ph.G. (Univ. of Nebraska) 1918,	Stromsburg, Neb.
Mason, Robert Leonard, A.B. (Lake Forest Coll.)	,
	lahoma City, Okla.
†Meachen, John Willis (Univ. of Vermont) 1918,	Shelton, Conn.
Mitchell, Edward Francis, A.B. (Holy Cross Coll.) 1907,	Clinton
Montgomery, Hamilton, A.B. 1918,	Chicago, Ill.
Moore, Richmond Lawrence, A.B. (Univ. of Virginia)	Omeago, III.
1918,	Lynchburg, Va.
· · · · · · · · · · · · · · · · · · ·	Lynchburg, va.
O'Brien, Francis John, A.B. (Holy Cross Coll.) 1912,	Pastan
A.M. (Clark Univ.) 1913, рн. D. (ibid.) 1916,	Boston
‡Pfaff, Dudley Alvey, s.B. (Indiana Univ.) 1918,	T 11 11 T 1
A.B. (Yale Univ.) 1919,	Indianapolis, Ind.

<sup>†</sup> Admitted on basis of two years' college work.

<sup>‡</sup> Admitted on basis of three years' college work.

<sup>§</sup> Admitted on basis of four years' college work (in several cases work for degree completed).

Pickles, Wilfred, A.B. (Brown Univ.) 1918, Edgewood, R. I. Pothier, Aubrev Joseph, A.B. (Holy Cross Coll.) 1918. New Bedford Powell, James Patrick, s.B. 1916, Cambridge †Quasser, Adolph Bernhard (Univ. of Cincinnati), Portsmouth, O. Ricketson, Oliver Garrison, Jr., A.B. 1916, Fernandina, Fla. Dorchester Ritvo, Max, A.B. 1918. Robinson, Hugh Laughlin, A.B. (Colby Coll.) 1918. Waterville, Me. Smith, Edward Charles, A.B. (Boston Coll.) 1918, Abington Sprague, Howard Burnham, A.B. 1918, Swampscott Standish, Erland Myles, s.B. (Wesleyan Univ.) 1918, Wethersfield, Conn. †Stephenson, Charles Wattles, A.B. (Williams Coll.) 1919, Pittsburgh, Pa. Stettbacher, Henry, s.B. (Bates Coll.) 1917, Ansonia, Conn. Stimson, Horace Pottle, A.B. (Amherst Coll.) 1918. Northampton !Sullivan, John James (Boston Coll, and Tufts Coll.). Boston Sullivan, Lewis Gregory, A.B. (Boston Coll.) 1918, Marblehead Suravitz, Benjamin Norman, A.B. 1919, Scranton, Pa. Paterson, N. J. Taylor, Grantley Walder, A.B. 1918, Tennis, Max, s.B. (Tufts Coll.) 1916, Dorchester Van Wagenen, William Perrine, A.B. (Cornell Univ.) Worcester, N. Y. 1918, Van Wart, William Haley, A.B. (Bowdoin Coll.) 1918, Cherryfield, Me. Versteegh, Arnoldus Dirk, Jr., A.B. (Univ. of Leiden) 1905, Brookline †Vestal, Paul William, Phar.d. (George Washington Univ.) 1915, Washington, D. C.

#### FIRST CLASS

Americus, Ga.

Revere

Providence, R. I.

McPherson, Kan.

Mt. Kisco, N. Y.

Westheimer, James Russell, A.B. (Cornell Univ.) 1917,

Wolff, Louis, s.B. (Mass. Institute of Technology) 1918,

Winkler, Herman Aaron, Ph.B. (Brown Univ.) 1918,

‡Wright, Lawrence E., A.B. (Univ. of Colorado) 1919,

†Alpers, Bernard Jacob (Harvard Univ.),

Anderson, Randolph Levy, s.B. (Univ. of Virginia) 1919,

‡Armstrong, Wilber Price, Jr. (Univ. of Illinois),

†Aronson, Israel Isaac (Boston Univ.),

†Atkinson, Mahlon Hicks (Univ. of North Carolina),

Balch, Franklin Greene, Jr., A.B. 1918,

‡Batchelder, Philip (New Hampshire State Coll.),

Benedict, Augustus Palmer, A.B. (Middlebury Coll.)

† Admitted on basis of two years' college work.

1917,

‡ Admitted on basis of three years' college work.

§ Admitted on basis of four years' college work (in several cases work for degree completed).

Benedict, Edward Benson, A.B. 1917,	Cambridge
†Bergman, Sidney Meyer (Harvard Univ.),	Boston
§Bortz, Edward LeRoy (Harvard Univ.),	Greensburg, Pa.
‡Bradshaw, Raymond Watson (Oberlin Coll.),	Sugar Grove, Pa.
Brock, Benjamin, A.B. (Univ. of Georgia) 1919,	Carrollton, Ga.
Brown, Albert Lincoln, A.B. (Univ. of California)	
1919,	an Francisco, Cal.
Bullwinkel, Frederick, s.B. (Rutgers Coll.) 1919,	Brooklyn, N. Y.
-Calhoun, Abner Wellborn, A.B. (Univ. of Georgia) 1918,	Atlanta, Ga.
†Campbell, Arch Phelps (Univ. of Wisconsin),	E. Ellsworth, Wis.
Cates, Samuel Clark, s.B. (Colby Coll.) 1912, s.m.	
(Pennsylvania State Coll.) 1915,	E. Vassalboro, Me.
§Channon, Hiram Bingham (Oberlin Coll.),	Oberlin, O.
Cochran, John Joseph, A.B. 1919,	Natick
Cohen, John, A.B. 1917, Bal	ta, Podolia, Russia
†Colson, Z. William (Emory Univ.),	Lawrence
Cooper, Charles Morgan, A.B. (Western Reserve Univ.)	
1919,	Warren, O.
Crocker, Willard Frederick, A.B. (Tufts Coll.) 1919,	Quincy
Cushing, Edward Harvey, A.B. (Yale Univ.) 1919,	Cleveland, O.
†Dameshek, William (Harvard Univ.),	Boston
†Davis, David (Tufts Premedical School and Harvard Unit	c.), Dorchester
DeDios, Gregorio Vergel, G.A. (Liceo de Manila) 1917,	Bulacan, P. I.
Drake, Leo Berthier, A.B. 1918, No.	ewfoundland, N. J.
Duggan, Daniel Joseph, A.B. 1919,	Wakefield
Dustin, Cecil Calvert, s.B. (New Hampshire State	
Coll.) 1919,	Rochester, N. H.
Edwards, Franz Gill, s.B. (Mass. Agricultural Coll.) 1917	, Boston
Ely, Julian Griffin, s.B. (Wesleyan Univ.) 1917,	Hamburg, Conn.
Fallon, John Michael, A.B. (Holy Cross Coll.) 1919,	Worcester
‡Gerstle, Mark Lewis, Jr. (Harvard Univ. and Univ.	
	San Francisco, Cal.
Goodale, Robert Lincoln, A.B. 1918,	Ipswich
§Goodstone, Samuel Bernard (Harvard Univ.),	Pittsburgh, Pa.
Gottlieb, Julius, s.B. 1918,	E. Boston
†Gundersen, Alf Helge (Univ. of Wisconsin),	La Crosse, Wis.
Hall, George Morris, s.B. (Mass. Agricultural Coll.) 1915,	
Harlow, John Stanley, A.B. 1917,	· Dixfield, Me.

<sup>†</sup> Admitted on basis of two years' college work.

<sup>‡</sup> Admitted on basis of three years' college work.

<sup>§</sup> Admitted on basis of four years' college work (in several cases work for degree completed).

Heath, Elmer Hinckley, Jr., s.B. (Mass. Institute of	
Technology) 1917,	Neponset
Herrmann, Albert Edward, A.B., PH.G. (Univ. of	
Nebraska) 1918,	Lincoln, Neb.
‡Higbee, Daniel Riggs (Colorado Coll.),	Fowler, Colo.
‡Hill, Howard Foster (Colby Coll.),	Waterville, Me.
Huang, Chung Hua, s.B. (Northwestern Univ.) 1919,	Washington, D. C.
Hunter, Frank Tennery, A.B. 1919,	Tampa, Fla.
Huntington, Frederic Sargent, A.B. (Colgate Univ.) 19	17, Hamilton, N. Y.
Hurd, Fritz Draper, s.B. (Pennsylvania Coll. of	
Gettysburg) 1916,	Williamsport, Md.
‡Hurxthal, Lewis Marshall (Kenyon Coll. and Har-	
vard Univ.),	Mansfield, O.
Inches, Charles Patrick, A.B. (Univ. of New Bruns-	
wick) 1916,	St. John, N. B., Can.
Jackson, Arthur Hartt, A.B. (Princeton Univ.) 1916,	Washington, Conn.
Johnson, Norman Percy, A.B. 1917,	Denver, Colo.
‡Johnson, Walfred, A.B. (Univ. of South Dakota) 1919,	Worcester
Katz, Samuel Elias, A.B., S.M. (Univ. of Michigan)	
1917,	Ann Arbor, Mich.
Krech, Shepard, A.B. (Yale Univ.) 1913,	Boston
§Lederman, Bernard (Harvard Univ.),	Dorchester
Little, Harold Greenleaf, s.B. (Mass. Agricultural	
Coll.) 1916,	Newburyport
Lyon, Julian Milton, s.B. (Rutgers Coll.) 1919,	Atlantic City, N. J.
McCarthy, John Daly, A.B. (Dartmouth Coll.) 1908,	•
A.M. (Columbia Univ.) 1911, PH.D. (New York Univ.)	) 1914, Fitchburg
McClellan, Walter Stuart, A.B. (Colgate Univ.) 1916,	Hamilton, N. Y.
McClure, William Lionel, A.B. (Drury Coll.) 1916,	
A.M. (Univ. of Illinois) 1919,	Lawton, Okla.
Merriam, Joseph Chapman, A.B. 1916,	Framingham Centre
‡Miles, George Stanley (Tufts Coll.),	W. Somerville
Mudd, Seeley Greenleaf, s.B. (Columbia Univ.) 1917,	Los Angeles, Cal.
§Munsell, Alexander Ector (Harvard Univ.),	Wellesley Hills
†Murphy, Thomas Basil (Harvard Univ.),	Medford
Neuswanger, Chris Harold, A.B. (Colorado Coll.) 1918,	Greeley, Colo.
§Perkins, Arthur (Harvard Univ.),	Ogden, Utah
†Pernokis, Evans William (Univ. of Chicago),	Allegan, Mich.

<sup>†</sup> Admitted on basis of two years' college work.

<sup>‡</sup> Admitted on basis of three years' college work.

<sup>§</sup> Admitted on basis of four years' college work (in several cases work for degree completed).

Prentice, Richard Kahle, A.B. 1917,	Norwich, Conn.
Quint, Samuel Theodore, s.B. (Tufts Coll.) 1919,	Malden
Reynolds, Edwin Drew, s.B. (Mass. Institute of	14 auch
Technology) 1917,	Danvers
Reynolds, Edward Joseph, s.B., PH.G. (Notre Dame	Danvers
Univ.) 1918,	Bellows Falls, Vt.
Richardson, Wyman, A.B. 1917,	Boston
Robinson, Harold Clinton, A.B. 1918,	Cambridge
Rogers, Horatio, A.B. 1919,	Chestnut Hill
\$Roth, Samuel Clement (Harvard Univ.),	Scranton, Pa.
Saunders, Stanley Stewart, A.B. (Hamilton Coll.) 1917,	
Schauffler, Goodrich Capen, A.B. (Williams Coll.) 1917,	Clinton, N. Y.
	New York, N. Y.
Selkirk, Theodore King, A.B. 1918,	Albany, N. Y.
†Sidel, Nathan (Tufts Premedical Sch.),	Dorchester
Simmons, James Greenleaf, A.B. (Grinnell Coll.) 1916,	Wellesley Hills
Skerrye, Wilbert Bancroft, A.B. (Brown Univ.) 1919,	Templeton
Smith, Linton Millard, s.B. (Shurtleff Coll.) 1916,	D : TII
s.m. (Univ. of Illinois) 1918,	Peoria, Ill.
Spangler, Paul Edwin, A.B. (Univ. of Oregon) 1919,	Eugene, Ore.
Spencer, Harvey, A.B. (Williams Coll.) 1919,	Orange, N. J.
†Stalker, Hugh Lyle (Harvard Univ.),	E. Boston
Stecher, Robert Morgan, s.B. (Dartmouth Coll.) 1919,	Cleveland, O.
†Stevens, Theodore Moulton (Univ. of Maine),	Portland, Me.
Stookey, Lionel Jerome, A.B. (Univ. of Utah) 1916,	Clover, Utah
Swan, Channing Stearns, A.B. 1919,	Stoughton
†Taylor, Leland Harris, PH.C. (Univ. of California) 1914,	Oakland, Cal.
Thiery, Raymond Donlé, A.B. 1918,	Somerville
Thompson, Frederick Gregg, Jr., PH.B. (Yale Univ.) 1919	, St. Joseph, Mo.
Tildon, Toussaint Tourgee, A.B. (Lincoln Univ.) 1912,	Fort Worth, Tex.
†Treanor, John Peter, Jr. (Harvard Univ.),	Dorchester
Trygstad, Reidar, c.E. (Bergen Technical School) 1914,	Bergen, Norway
Twomey, Charles Francis, A.B. (Boston Coll.) 1917,	Lynn
Vail, Derrick Tilton, Jr., A.B. (Yale Univ.) 1919,	Cincinnati, O.
§Waldron, Arthur Scott (Tufts Coll.),	Somerville
Walker, Arthur Meeker, A.B. (Williams Coll.) 1919,	Chicago, Ill.
Warren, Shields, A.B. (Boston Univ.) 1918,	Brookline
Weeks, Joshua Herbert, PH.B. (Brown Univ.) 1919,	New Bedford
Weller, Theodore Warford, s.B. (Oregon Agricultural	
Coll.) 1916, San Jose,	Alameda Co., Cal.

<sup>†</sup> Admitted on basis of two years' college work. § Admitted on basis of four years' college work (in several cases work for degree completed).

Wetterberg, Louis Ferdinand, S.B. (Rutgers Coll.)	
1919,	Perth Amboy, N. J.
‡Whitaker, Lester Ray (New Hampshire State Coll.	
and Boston Univ.),	Berwick, Me.
White, James Clarke, A.B. 1917,	Boston
†Whiting, Walter Belknap (Washington and Lee Univ.),	Summit, N. J.
‡Wilkins, William Thomas, Jr. (Harvard Univ.),	Kingstree, S. C.
Williams, Gonsalvo Cotobus, Jr., A.B. (Benedict Coll.)	
1916, s.B. (Harvard Univ.) 1918,	Columbia, S. C.
‡Williams, Glenn Dewey (Cornell Coll., Ia.),	Olin, Ia.
Williams, Harold Vanderelst, A.B. (Boston Univ.) 1919	, Reading
Wiswall, Harold Curtis, A.B. 1919,	Wellesley
Wolff, Harold George, s.B. (Coll. of the City of New	
York) 1918,	New York, N. Y.
Woodford, Francis Bowditch, Ph.B. (Yale Univ.)	
1918,	New Haven, Conn.
Woodmansee, Clarence Henry, A.B. (Brown Univ.)	
1917,	Providence, R. I.
Wright, Arthur William, A.B. 1917,	Ridgefield Park, N. J.
‡Wright, Herbert Beach (Univ. of Wisconsin),	Milwaukee, Wis.
Young, Kenneth Thwing, A.B. (Univ. of Maine) 1919,	Arlington

#### SUMMARY

CANDIDATES FOR THE	D	E	R	EЮ	0	F	D	oc	то	R	OF	ŀ	. U	$\mathbf{BL}$	IC	
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CANDIDATES FOR THE	DE	GI	E.	E (	ЭF	D	oc	TC	$\mathbf{R}$	OF	N	ſΕ	DI	CIL	Œ	
FOURTH CLASS																104
THIRD CLASS.																101
SECOND CLASS																88
FIRST CLASS .																120
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Total.																419

<sup>†</sup> Admitted on basis of two years' college work.

<sup>‡</sup> Admitted on basis of three years' college work.

# DISTRIBUTION BY COLLEGES AND PREPARATION

DISTRIBUTION BY COLLEGES AND PREPARATION\*

Location  Alabama Michigan Pennsylvania Massachusetts Turkey Massachusetts Maine Wisconsin South Carolina Norway Germany Massachusetts Maine Rhode Island Indiana California Minnesota District of Col. Millionis Otheory	mia setts olina 1 setts 2 setts 2 setts 2	Year Year Year 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4th Year 1 :: : : : : : : : : : : : : : : : : :	Cand. D.P.H.	1st	10	1	4th	7	
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New Hampshire North Carolina Ohio Nebraska Missouri Georgia Georgia Iowa New York Massachusetts	China Illinois Indiana Rasanchusetts Illinois Indiana Ransa Ohio Pennsylvania Illinois Pennsylvania Relland California Tennessee Sween Evilippine Isls. Maine Philippine Isls. Massachusetts Minippine Isls. Germont Minnesota Minnesota Minnesota Minsouri China China
Dartmouth College Deardson College Dension University Dona College Brnory College Senory College Georgia, University of Senory College Hamilton College Hamilton College Hamilton College Harvard College Harvard College Harvard College	Premedical Department Holy Coss College Hinois, University of Kanasa, University of Kanasa, University of Kanasa, University of Lagivette College Lagivette College Lake Forest College Lake Forest College Lake House College Lake House College Lake House Live College Lake House Live College Lake House Live College Lake Live College Lake House Live College Manie, University of Manie, Liceo de Manichan, University of Mass. College of Pharmacy Mass. College of Pharmacy Mass. College of Pharmacy Missouri, University of Missouri, University of Missouri, University of Nissouri, University of Nissouri, University of Nearsaka, University of Nearsaka, University of Nearsaka, University of Nearsaka, University of

· Students were admitted from certain of these colleges only on the basis of having done additional work at an approved college.

DISTRIBUTION BY COLLEGES AND PREPARATION (continued)

		Ad	Admitted on basis of a degree	on basis	s of a d	egree	Admi	tted on	basis of colleg	sis of 2, 3, or college work	Admitted on basis of 2, 3, or 4 years' college work	
Institution giving Fremedical Training	Location	1st Year	2d Year	3d Year	4th Year	Cand. D.P.H.	1st Year	2d Year	3d Year	4th Year	Cand. D.P.H.	Total
New Brunswick, University of New Hampshire State Coll. New York University of New York University of North Carolina, University of North Carolina, University Oberlin College University Oberlin College Oregon Agricultural College Oregon, Agricultural College Pernsylvania State College Pernsylvania State College Pernsylvania State College Pernsylvania State College Pittsburgh, University of Peking Governmental University of Rede College Rutgers College Shurtleff College Trinity College University of Texas, University of University University of Un	Canada New York New York No. Carolina Illinois Indiana Ohio Ohio Ohio Oklahoma Oregon Missouri Pennsylvania Pennsylvania Pennsylvania Pennsylvania Pennsylvania Oregon Missouri Missouri Missouri Pennsylvania Pennsylvania Pennsylvania Pennsylvania Pennsylvania Pennsylvania Pennsylvania Pennsylvania New Jersey China Oregon Rhode Island New Jersey Illinois South Daketa I'Ennessee Tennessee	©=== :== : :== :== := : : :::::::::::::	4 : : : : : : : : : : : : : : : : : : :	8 ::::::::::::::::::::::::::::::::::::	20 : : : : : : : : : : : : : : : : : : :	La : : : : : : : : : : : : : : : : : : :	g :a : : :a : : : : : : : : : : : : : :	8 ::::::::::::::::::::::::::::::::::::	8 · · · · · · · · · · · · · · · · · · ·	8 : : : : : : : : : : : : : : : : : : :	N ::::::::::::::::::::::::::::::::::::	818-10-10-10-10-10-10-10-10-10-10-10-10-10-
Tufts Premedical School Utah, University of	Massachusetts Utah	:-	:::	:	::	:::	× :	::	<b>-</b> '.:.	:4	::	9

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Vermont, Univ. of Virginia Poytechnic Institution Virginia, University of Washington University Washington, University Washington and Lee College Washington and Lee College Western Reserve University William Jewell Coll. Williams College Wisconsin, University of Yale University of Totals Totals

#### ANNOUNCEMENT FOR 1920-21

The next session of the Medical School begins September 27, 1920. All students are required to register at the Dean's office on this day. Students registering in the Medical School for the first time will meet in the Amphitheatre in the Administration Building of the Harvard Medical School, on Monday, the 27th of September, at 10 A.M. Students desiring to enter the Harvard Medical School in the first-year class, or with advanced standing, should file an application blank, which can be obtained from the Dean's office, on or before May 1, 1920.

#### CALENDAR

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- Sept. 15, Wednesday. Examinations begin for applicants for advanced standing, and for men previously conditioned.
- Sept. 27, Monday. Academic Year begins. Registration of Students. Payment of the first instalment of the tuition-fee is required on or before this date.
- Oct. 12, Tuesday. Columbus Day: a holiday.
- Nov. 25, Thursday. Thanksgiving Day: a holiday.
- Dec. 10, Friday. Last day for receiving applications for the Cheever, Haven, and Hayden Scholarships.

## RECESS FROM DEC. 23, 1920, TO JAN. 2, 1921, INCLUSIVE 1921.

- Jan. 1, Saturday. New Year's Day: a holiday.
- Jan. 15, Saturday. Last day for receiving applications from students in the Professional Schools to be qualified for the degrees of Ph.D. and A.M. in 1921.
- Jan. 26, Wednesday. Mid-year Examinations begin.
- Jan. 31, Monday. Payment of the second instalment of the tuitionfee is required on or before this date.
- Feb. 1, Tuesday. Second half-year begins.
- Feb. 22, Tuesday. Washington's Birthday: a holiday.
- April I, Friday. Last day for receiving dissertations for the Bowdoin Prizes.

RECESS FROM APRIL 17 TO APRIL 23, INCLUSIVE

May 2, Monday. Last day for receiving dissertations for the Dante, Toppan, and Sumner Prizes.

May 2, Monday. Last day for receiving applications for the Bullard Fellowships and the Moseley Travelling Fellowships.

May 2, Monday. Last day for receiving applications for Scholarships for 1921-22 (except the Cheever, Haven, and Hayden Scholarships).

May 2, Monday. Last day for receiving applications of candidates for the degree of M.D. in 1921.

May 30, Monday. Memorial Day: a holiday.

June 1, Wednesday. Examinations begin.

June 23, Thursday. Commencement.

SUMMER VACATION, FROM COMMENCEMENT TO SEPTEMBER 25, INCLUSIVE

Sept. 14, Wednesday. Examinations begin for applicants for advanced standing, and for men previously conditioned.

Sept. 26, Monday. Academic Year begins. Registration of Students. Payment of the first instalment of the tuition-fee is required on or before this date.

Oct. 12, Wednesday. Columbus Day: a holiday.

Nov. 24, Thursday. Thanksgiving Day: a holiday.

Dec. 10, Saturday. Last day for receiving applications for the Cheever, Haven, and Hayden Scholarships.



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